

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

CENTRAL VALLEY REGION

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ORDER NO. R5-2010-XXXX
NPDES NO. CA0077836

WASTE DISCHARGE REQUIREMENTS FOR THE OLIVEHURST PUBLIC UTILITY DISTRICT WASTEWATER TREATMENT FACILITY YUBA COUNTY

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 1. Discharger Information

Discharger	Olivehurst Public Utility District
Name of Facility	Wastewater Treatment Facility
Facility Address	3908 Mary Avenue
	Olivehurst, CA 95961
	Yuba County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a major discharge.	

The discharge by the Olivehurst Public Utility District from the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Treated Municipal Wastewater	39° 03' 55" N	121° 33' 08" W	Western Pacific Interceptor Drainage Canal

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	XX May 2010
This Order shall become effective on:	50 days after the adoption of this Order
This Order shall expire on:	XX May 2015
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	180 days prior to the Order expiration date

I, **Pamela C. Creedon**, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on **XX May 2010**.

Pamela C. Creedon, Executive Officer

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26 March 2010

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I. FACILITY INFORMATION

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 4. Facility Information

Discharger	Olivehurst Public Utility District
Name of Facility	Wastewater Treatment Facility
Facility Address	3908 Mary Avenue
	Olivehurst, CA 95961
	Yuba County
Facility Contact, Title, and Phone	Greg Axline, Chief Plant Operator, (530) 682-7841
Mailing Address	1970 9 th Avenue, PO Box 670, Olivehurst, CA 95961
Type of Facility	Publicly Owned Treatment Works
Facility Permitted Flow	5.1 million gallons per day (mgd)
Current Facility Design Flow	3.0 mgd

II. FINDINGS

The California Regional Water Quality Control Board, Central Valley Region (hereinafter Regional Water Board), finds:

A. Background. Olivehurst Public Utility District (hereinafter Discharger) is currently discharging pursuant to Order No. R5-2004-0094 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0077836. The Discharger submitted a Report of Waste Discharge, dated 16 December 2008, and applied for a NPDES permit renewal to discharge up to 3.0 million gallons per day of treated wastewater from the Olivehurst Public Utility District Wastewater Treatment Facility (WWTF), hereinafter Facility. The application was deemed complete on 17 December 2008.

For the purposes of this Order, references to the “discharger” or “permittee” in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

B. Facility Description. The Discharger owns and operates a publicly owned wastewater treatment plant. The treatment system consists of fine screening, grit removal, two oxidation ditches, three secondary clarifiers, equalization basin, tertiary filtration and ultraviolet disinfection. Sludge is treated in sludge lagoons, dewatered in sludge drying beds, and hauled to a landfill for disposal. Tertiary treated wastewater is discharged from Discharge Point No. 001 (see table on cover page) to the Western Pacific Interceptor Drainage Canal, a water of the United States, and a tributary to the Bear River within the Sacramento River Basin. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

- C. Legal Authorities.** This Order is issued pursuant to section 402 of the Clean Water Act (CWA) and implementing regulations adopted by USEPA and chapter 5.5, division 7 of the California Water Code (CWC; commencing with section 13370). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the CWC (commencing with section 13260).
- D. Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E and G through H are also incorporated into this Order.
- E. California Environmental Quality Act (CEQA).** Under CWC section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100-21177.
- F. Technology-based Effluent Limitations.** Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations (40 CFR 122.44), require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR Part 133 and Best Professional Judgment (BPJ) in accordance with 40 CFR 125.3. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet.
- G. Water Quality-based Effluent Limitations (WQBELs).** Section 301(b) of the CWA and 40 CFR 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. This Order contains requirements, expressed as a technology equivalence requirement, that are necessary to achieve water quality standards. The Regional Water Board has considered the factors listed in CWC section 13241 in establishing these requirements. The rationale for these requirements, which consist of tertiary treatment or equivalent requirements, is discussed in the Fact Sheet.

40 CFR 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative

criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).

H. Water Quality Control Plans. The Regional Water Board adopted a *Water Quality Control Plan, Fourth Edition (Revised February 2007)*, for the Sacramento and San Joaquin River Basins (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Basin Plan at page II-2.00 states that the “...*beneficial uses of any specifically identified water body generally apply to its tributary streams.*” The Basin Plan does not specifically identify beneficial uses for the Western Pacific Interceptor Drainage Canal, but does identify present and potential uses for the Bear River, to which the Western Pacific Interceptor Drainage Canal, is tributary. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Thus, as discussed in detail in the Fact Sheet, beneficial uses applicable to the Western Pacific Interceptor Drainage Canal are as follows:

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Bear River via the Western Pacific Interceptor Drainage Canal	<p><u>Existing:</u> Municipal and domestic supply (MUN), Agricultural supply (AGR), Hydropower generation (POW), Water contact recreation (REC-1), Non-contact water recreation (REC-2), Warm freshwater habitat (WARM); Cold freshwater habitat (COLD), Wildlife habitat (WILD).</p> <p><u>Potential:</u> Migration of aquatic organisms (MIGR), and Spawning, reproduction and/or early development of fish (SPWN).</p>

The Basin Plan includes a list of Water Quality Limited Segments (WQLSs), which are defined as “...*those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 CFR 130, et seq.).*” The Basin Plan also states, “*Additional treatment beyond minimum federal standards will be imposed on dischargers to WQLSs. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment.*” The Bear River is currently listed as a WQLS for diazinon in the 303(d) list of impaired water bodies. Data collected between September 2006 and February 2009 demonstrates there is no reasonable potential for diazinon; therefore, a final effluent limit for diazinon is not included in this Order.

- I. National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on 22 December 1992, and later amended it on 4 May 1995 and 9 November 1999. About 40 criteria in the NTR applied in California. On 18 May 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on 13 February 2001. These rules contain water quality criteria for priority pollutants.
- J. State Implementation Policy.** On 2 March 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on 28 April 2000 with respect to the priority pollutant criteria promulgated for California by USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on 18 May 2000 with respect to the priority pollutant criteria promulgated by USEPA through the CTR. The State Water Board adopted amendments to the SIP on 24 February 2005 that became effective on 13 July 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
- K. Compliance Schedules and Interim Requirements.** In general, an NPDES permit must include final effluent limitations that are consistent with CWA section 301 and with 40 CFR 122.44(d). There are exceptions to this general rule. The State Water Board has concluded that where the Regional Water Board's Basin Plan allows for schedules of compliance and the Regional Water Board is newly interpreting a narrative standard, it may include schedules of compliance in the permit to meet effluent limits that implement a narrative standard. See *In the Matter of Waste Discharge Requirements for Avon Refinery* (State Water Board Order WQ 2001-06 at pp. 53-55). See also *Communities for a Better Environment et al. v. State Water Resources Control Board*, 34 Cal.Rptr.3d 396, 410 (2005). The Basin Plan for the Sacramento and San Joaquin Rivers includes a provision that authorizes the use of compliance schedules in NPDES permits for water quality objectives that are adopted after the date of adoption of the Basin Plan, which was 25 September 1995 (see Basin Plan at page IV-16). Consistent with the State Water Board's Order in the CBE matter, the Regional Water Board has the discretion to include compliance schedules in NPDES permits when it is including an effluent limitation that is a "new interpretation" of a narrative water quality objective. This conclusion is also consistent with USEPA policies and administrative decisions. See, e.g., *Whole Effluent Toxicity (WET) Control Policy*. The Regional Water Board, however, is not required to include a schedule of compliance, but may issue a Time Schedule Order pursuant to CWC section 13300 or a Cease and Desist Order pursuant to CWC section 13301 where it finds that the discharger is violating or threatening to violate the permit. The Regional Water Board will consider the merits of each case in determining whether it is appropriate to include a compliance schedule in a permit, and, consistent with the Basin Plan, should consider feasibility of achieving compliance, and must impose a schedule that is as short as practicable to achieve compliance with the objectives, criteria, or effluent limit based on the objective or criteria.

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Section 2.1 of the SIP provides that, based on a Discharger's request and demonstration that it is infeasible for an existing Discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or 18 May 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. This Order does not include compliance schedules and interim effluent limitations.

- L. Alaska Rule.** On 30 March 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes. (40 CFR 131.21 and 65 FR 24641 (27 April 2000).) Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after 30 May 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by 30 May 2000 may be used for CWA purposes, whether or not approved by USEPA.

- M. Stringency of Requirements for Individual Pollutants.** This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on biochemical oxygen demand (BOD₅), total suspended solids (TSS), flow, and pH. The WQBELs consist of restrictions on ammonia, tetrachloroethene, nitrate and nitrite. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the CTR-SIP, which was approved by USEPA on 18 May 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to 30 May 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to 30 May 2000, but not approved by USEPA before that date, are nonetheless "*applicable water quality standards for purposes of the [Clean Water] Act*" pursuant to 40 CFR 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

- N. Antidegradation Policy.** 40 CFR 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. As discussed in detail in the Fact Sheet, the permitted discharge is consistent with the antidegradation provision of 40 CFR 131.12 and Resolution No. 68-16.
- O. Anti-Backsliding Requirements.** Sections 303(d)(4) and 402(o)(2) of the CWA and federal regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions. Some effluent limitations in this Order are less stringent than those in Order No. R5-2004-0094. As discussed in detail in the Fact Sheet, this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.
- P. Endangered Species Act.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The discharger is responsible for meeting all requirements of the applicable Endangered Species Act.
- Q. Monitoring and Reporting.** 40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. CWC sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. The Monitoring and Reporting Program is provided in Attachment E.
- R. Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the Fact Sheet.
- This Order requires the Discharger to submit a salinity evaluation and minimization plan and a mercury evaluation and minimization plan.
- S. Provisions and Requirements Implementing State Law.** The provisions/requirements in sections V.B, VI.C.4.b, VI.C.5.b, VI.C.5.c, VI.C.5.d, and

VI.C.5.e of this Order are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

T. Notification of Interested Parties. The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order.

U. Consideration of Public Comment. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet.

THEREFORE, IT IS HEREBY ORDERED, that Order No. R5-2004-0094 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the CWC (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

- A.** Discharge of wastewater at a location or in a manner different from that described in the Findings is prohibited.
- B.** The by-pass or overflow of wastes to surface waters is prohibited, except as allowed by Federal Standard Provisions I.G. and I.H. (Attachment D).
- C.** Neither the discharge nor its treatment shall create a nuisance as defined in section 13050 of the CWC.
- D.** The Discharger shall not allow pollutant-free wastewater to be discharged into the collection, treatment, and disposal system in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means rainfall, groundwater, cooling waters, and condensates that are essentially free of pollutants.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point No. 001

1. Final Effluent Limitations – Discharge Point No. 001 (3.0 mgd)

- a. Effective immediately, until the Executive Officer's approval of the flowrate increase to 5.1 mgd (compliance with section VI.C.4.c) the Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. 001, with compliance measured at Monitoring Location EFF-001 as described in the Monitoring and Reporting Program:

Table 6. Effluent Limitations for 3.0 mgd Average Dry Weather Flow

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
BOD ₅ @ 20°C ¹	mg/L	10	15	20	--	--
	lbs/day ¹	250	380	500	--	--
Total Suspended Solids ¹	mg/L	10	15	20	--	--
	lbs/day ¹	250	380	500	--	--
pH	SU	--	--	--	6.5	8.5
Ammonia	mg/L	1.1	--	2.1	--	--
	lbs/day ¹	28	--	53	--	--
Tetrachloroethene	µg/L	0.8	--	1.6	--	--
	lbs/day ¹	0.02	--	0.04	--	--
Nitrate	mg/L	10	--	--	--	--
	lbs/day ¹	250	--	--	--	--
Nitrite	mg/L	1.0	--	--	--	--
	lbs/day ¹	25	--	--	--	--

¹ Based on a design average dry weather flow of 3.0 mgd.

- b. **Percent Removal.** The average monthly percent removal of 5-day biochemical oxygen demand (BOD₅) and total suspended solids (TSS) shall not be less than 85 percent.
- c. **Acute Whole Effluent Toxicity.** Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:
- 70%, minimum for any one bioassay; and
 - 90%, median for any three consecutive bioassays.
- d. **Total Coliform Organisms.** Effluent total coliform organisms shall not exceed:
- 2.2 most probable number (MPN) per 100 mL, as a 7-day median;
 - 23 MPN/100 mL, more than once in any 30-day period; and
 - 240 MPN/100 mL, as an instantaneous maximum.

- e. **Average Dry Weather Flow.** The average dry weather discharge flow shall not exceed 3.0 mgd.
- f. **Chronic Whole Effluent Toxicity.** There shall be no chronic toxicity in the effluent discharge.
- g. **Electrical Conductivity.** For a calendar year, the annual average effluent electrical conductivity shall not exceed 700 µmhos/cm.

2. Final Effluent Limitations – Discharge Point No. 001 (5.1 mgd)

- a. Upon compliance with section VI.C.4.c, the Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. 001, with compliance measured at Monitoring Location EFF-001 as described in the Monitoring and Reporting Program:

Table 7. Effluent Limitations for 5.1 mgd Average Dry Weather Flow

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
BOD ₅ @ 20°C ¹	mg/L	10	15	20	--	--
	lbs/day ¹	430	640	850	--	--
Total Suspended Solids ¹	mg/L	10	15	20	--	--
	lbs/day ¹	430	640	850	--	--
pH	SU	--	--	--	6.5	8.5
Ammonia	mg/L	1.1	--	2.1	--	--
	lbs/day ¹	47	--	89	--	--
Tetrachloroethene	µg/L	0.8	--	1.6	--	--
	lbs/day ¹	0.03	--	0.07	--	--
Nitrate	mg/L	10	--	--	--	--
	lbs/day ¹	430	--	--	--	--
Nitrite	mg/L	1.0	--	--	--	--
	lbs/day ¹	43	--	--	--	--

¹ Based on a design average dry weather flow of 5.1 mgd.

- b. **Percent Removal.** The average monthly percent removal of 5-day biochemical oxygen demand (BOD₅) and total suspended solids (TSS) shall not be less than 85 percent.
- c. **Acute Whole Effluent Toxicity.** Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:
 - i. 70%, minimum for any one bioassay; and
 - ii. 90%, median for any three consecutive bioassays.

d. Total Coliform Organisms. Effluent total coliform organisms shall not exceed:

- i. 2.2 most probable number (MPN) per 100 mL, as a 7-day median;
- ii. 23 MPN/100 mL, more than once in any 30-day period; and
- iii. 240 MPN/100 mL, as an instantaneous maximum.

e. Average Dry Weather Flow. The average dry weather discharge flow shall not exceed 5.1 mgd.

f. Chronic Whole Effluent Toxicity. There shall be no chronic toxicity in the effluent discharge.

g. Electrical Conductivity. For a calendar year, the annual average effluent electrical conductivity shall not exceed 700 μ mhos/cm.

3. Interim Effluent Limitations – Discharge Point No. 001

a. Mercury, Total Recoverable. Effective immediately, the total calendar year mass discharge of total mercury shall not exceed 0.78 pounds. This interim performance-based limitation shall be in effect until the Regional Water Board establishes final effluent limitations after adoption of a mercury TMDL.

b. Ammonia. During the period beginning on the effective date of this Order and ending 5 years from the adoption date, the Discharger shall maintain compliance with the following effluent limitations for ammonia at Discharge Point No. 001, with compliance measured at Monitoring Location EFF-001 as described in the Monitoring and Reporting Program. These interim effluent limitations shall apply in lieu of the final maximum daily effluent limitations specified for ammonia in Table 6 (section IV.A.1.a) during the time period indicated in this provision.

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Table 8. Interim Effluent Limitations

Effluent pH	One-Hour Average Total Ammonia Concentration (mg N/L)
6.5	32.6
6.6	31.3
6.7	29.8
6.8	28.0
6.9	26.2
7.0	24.1
7.1	21.9
7.2	19.7
7.3	17.5
7.4	15.3
7.5	13.3
7.6	11.4
7.7	9.64
7.8	8.11
7.9	6.77
8.0	5.62
8.1	4.64
8.2	3.83
8.3	3.15
8.4	2.59
8.5	2.14
8.6	1.77
8.7	1.47
8.8	1.23
8.9	1.04
9.0	0.885

B. Land Discharge Specifications – NOT APPLICABLE

C. Reclamation Specifications – NOT APPLICABLE

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the following in Western Pacific Interceptor Drainage Canal:

- 1. Bacteria.** The fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, to exceed a geometric mean of 200 MPN/100 mL,

nor more than 10 percent of the total number of fecal coliform samples taken during any 30-day period to exceed 400 MPN/100 mL.

2. **Biostimulatory Substances.** Water to contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.
3. **Chemical Constituents.** Chemical constituents to be present in concentrations that adversely affect beneficial uses.
4. **Color.** Discoloration that causes nuisance or adversely affects beneficial uses.
5. **Dissolved Oxygen:**
 - a. The monthly median of the mean daily dissolved oxygen concentration to fall below 85 percent of saturation in the main water mass;
 - b. The 95 percentile dissolved oxygen concentration to fall below 75 percent of saturation; nor
 - c. The dissolved oxygen concentration to be reduced below 7.0 mg/L at any time.
6. **Floating Material.** Floating material to be present in amounts that cause nuisance or adversely affect beneficial uses.
7. **Oil and Grease.** Oils, greases, waxes, or other materials to be present in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.
8. **pH.** The pH to be depressed below 6.5 nor raised above 8.5 SU.
9. **Pesticides:**
 - a. Pesticides to be present, individually or in combination, in concentrations that adversely affect beneficial uses;
 - b. Pesticides to be present in bottom sediments or aquatic life in concentrations that adversely affect beneficial uses;
 - c. Total identifiable persistent chlorinated hydrocarbon pesticides to be present in the water column at concentrations detectable within the accuracy of analytical methods approved by USEPA or the Executive Officer;
 - d. Pesticide concentrations to exceed those allowable by applicable antidegradation policies (see State Water Board Resolution No. 68-16 and 40 CFR 131.12.);
 - e. Pesticide concentrations to exceed the lowest levels technically and economically achievable;

f. Pesticides to be present in concentration in excess of the maximum contaminant levels set forth in CCR, Title 22, division 4, chapter 15; nor

g. Thiobencarb to be present in excess of 1.0 µg/L.

10. Radioactivity:

a. Radionuclides to be present in concentrations that are harmful to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.

b. Radionuclides to be present in excess of the maximum contaminant levels specified in Table 4 (MCL Radioactivity) of section 64443 of Title 22 of the California Code of Regulations.

11. Suspended Sediments. The suspended sediment load and suspended sediment discharge rate of surface waters to be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

12. Settleable Substances. Substances to be present in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.

13. Suspended Material. Suspended material to be present in concentrations that cause nuisance or adversely affect beneficial uses.

14. Taste and Odors. Taste- or odor-producing substances to be present in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses.

15. Temperature. The natural temperature to be increased by more than 5°F.

16. Toxicity. Toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.

17. Turbidity.

a. Shall not exceed 2 Nephelometric Turbidity Unit (NTU) where natural turbidity is less than 1 NTU;

b. Shall not increase more than 1 NTU where natural turbidity is between 1 and 5 NTUs;

c. Shall not increase more than 20 percent where natural turbidity is between 5 and 50 NTUs;

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- d. Shall not increase more than 10 NTU where natural turbidity is between 50 and 100 NTUs; nor
- e. Shall not increase more than 10 percent where natural turbidity is greater than 100 NTUs.

B. Groundwater Limitations

1. Release of waste constituents from any portion of the Facility shall not cause the underlying groundwater to contain waste constituents in concentrations greater than background water quality or water quality objectives, whichever is greater. The discharge shall not cause the groundwater to exceed water quality objectives, unreasonably affect beneficial uses, or cause a condition of pollution or nuisance.

VI. PROVISIONS

A. Standard Provisions

1. The Discharger shall comply with all (federal NPDES standard conditions from 40 CFR Part 122) Standard Provisions included in Attachment D of this Order.
2. The Discharger shall comply with the following provisions:
 - a. If the Discharger's wastewater treatment plant is publicly owned or subject to regulation by California Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to Title 23, CCR, division 3, chapter 26.
 - b. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
 - i. violation of any term or condition contained in this Order;
 - ii. obtaining this Order by misrepresentation or by failing to disclose fully all relevant facts;
 - iii. a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and
 - iv. a material change in the character, location, or volume of discharge.

The causes for modification include:

- *New regulations.* New regulations have been promulgated under section 405(d) of the CWA, or the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued.

- *Land application plans.* When required by a permit condition to incorporate a land application plan for beneficial reuse of sewage sludge, to revise an existing land application plan, or to add a land application plan.
- *Change in sludge use or disposal practice.* Under 40 CFR 122.62(a)(1), a change in the Discharger's sludge use or disposal practice is a cause for modification of the permit. It is cause for revocation and reissuance if the Discharger requests or agrees.

The Regional Water Board may review and revise this Order at any time upon application of any affected person or the Regional Water Board's own motion.

- c. If a toxic effluent standard or prohibition (including any scheduled compliance specified in such effluent standard or prohibition) is established under section 307(a) of the CWA, or amendments thereto, for a toxic pollutant that is present in the discharge authorized herein, and such standard or prohibition is more stringent than any limitation upon such pollutant in this Order, the Regional Water Board will revise or modify this Order in accordance with such toxic effluent standard or prohibition.

The Discharger shall comply with effluent standards and prohibitions within the time provided in the regulations that establish those standards or prohibitions, even if this Order has not yet been modified.

- d. This Order shall be modified, or alternately revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:
 - i. contains different conditions or is otherwise more stringent than any effluent limitation in the Order; or
 - ii. controls any pollutant limited in the Order.

The Order, as modified or reissued under this paragraph, shall also contain any other requirements of the CWA then applicable.

- e. The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.
- f. The Discharger shall take all reasonable steps to minimize any adverse effects to waters of the State or users of those waters resulting from any discharge or sludge use or disposal in violation of this Order. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or sludge use or disposal.

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- g. The Discharger shall ensure compliance with any existing or future pretreatment standard promulgated by USEPA under section 307 of the CWA, or amendment thereto, for any discharge to the municipal system.
- h. A copy of this Order shall be maintained at the discharge facility and be available at all times to operating personnel. Key operating personnel shall be familiar with its content.
- i. Safeguard to electric power failure:
 - i. The Discharger shall provide safeguards to assure that, should there be reduction, loss, or failure of electric power, the discharge shall comply with the terms and conditions of this Order.
 - ii. Upon written request by the Regional Water Board the Discharger shall submit a written description of safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. A description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past 5 years on effluent quality and on the capability of the Discharger to comply with the terms and conditions of the Order. The adequacy of the safeguards is subject to the approval of the Regional Water Board.
 - iii. Should the treatment works not include safeguards against reduction, loss, or failure of electric power, or should the Regional Water Board not approve the existing safeguards, the Discharger shall, within 90 days of having been advised in writing by the Regional Water Board that the existing safeguards are inadequate, provide to the Regional Water Board and USEPA a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the Discharger shall comply with the terms and conditions of this Order. The schedule of compliance shall, upon approval of the Regional Water Board, become a condition of this Order.
- j. The Discharger, upon written request of the Regional Water Board, shall file with the Board a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. This report may be combined with that required under Regional Water Board Standard Provision contained in section VI.A.2.i. of this Order.

The technical report shall:

- i. Identify the possible sources of spills, leaks, untreated waste by-pass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.

- ii. Evaluate the effectiveness of present facilities and procedures and state when they became operational.
- iii. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

The Regional Water Board, after review of the technical report, may establish conditions which it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions shall be incorporated as part of this Order, upon notice to the Discharger.

- k. A publicly owned treatment works whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment and disposal facilities. The projections shall be made in January, based on the last 3 years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in 4 years, the Discharger shall notify the Regional Water Board by 31 January. A copy of the notification shall be sent to appropriate local elected officials, local permitting agencies and the press. Within 120 days of the notification, the Discharger shall submit a technical report showing how it will prevent flow volumes from exceeding capacity or how it will increase capacity to handle the larger flows. The Regional Water Board may extend the time for submitting the report.
- l. The Discharger shall submit technical reports as directed by the Executive Officer. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.
- m. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, sections 13385, 13386, and 13387.
- n. For publicly owned treatment works, prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (CWC section 1211).

- o. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, maximum daily effluent limitation, 1-hour average effluent limitation, or receiving water limitation contained in this Order, the Discharger shall notify the Regional Water Board by telephone (916) 464-3291 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within 5 days, unless the Regional Water Board waives confirmation. The written notification shall include the information required by the Standard Provision contained in Attachment D section V.E.1. [40 CFR 122.41(l)(6)(i)].
- p. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.
- q. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Regional Water Board.

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Regional Water Board and a statement. The statement shall comply with the signatory and certification requirements in the federal Standard Provisions (Attachment D, section V.B) and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the CWC. Transfer shall be approved or disapproved in writing by the Executive Officer.

B. Monitoring and Reporting Program Requirements

The Discharger shall comply with the Monitoring and Reporting Program, and future revisions thereto, in Attachment E of this Order.

C. Special Provisions

1. Reopener Provisions

- a. Conditions that necessitate a major modification of a permit are described in 40 CFR 122.62, including:
 - i. If new or amended applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, this

permit may be reopened and modified in accordance with the new or amended standards.

- ii. When new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance.
- b. **Mercury.** If mercury is found to be causing toxicity based on acute or chronic toxicity test results, or if a TMDL program is adopted, this Order shall be reopened and the interim mass effluent limitation modified (higher or lower) or an effluent concentration limitation imposed. If the Regional Water Board determines that a mercury offset program is feasible for Dischargers subject to a NPDES permit, then this Order may be reopened to reevaluate the interim mercury mass loading limitation(s) and the need for a mercury offset program for the Discharger.
- c. **Whole Effluent Toxicity.** As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if the State Water Board revises the SIP's toxicity control provisions that would require the establishment of numeric chronic toxicity effluent limitations, this Order may be reopened to include a numeric chronic toxicity effluent limitation based on the new provisions.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

- a. **Chronic Whole Effluent Toxicity.** For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct chronic whole effluent toxicity (WET) testing, as specified in the Monitoring and Reporting Program (Attachment E, section V). Furthermore, this Provision requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity. If the discharge exhibits a pattern of toxicity exceeding the numeric toxicity monitoring trigger during accelerated monitoring established in this Provision, the Discharger is required to initiate a TRE in accordance with an approved TRE Workplan, and take actions to mitigate the impact of the discharge and prevent recurrence of toxicity. A TRE is a site-specific study conducted in a stepwise process to identify the source(s) of toxicity and the effective control measures for effluent toxicity. TREs are designed to identify the causative agents and sources of effluent toxicity, evaluate the effectiveness of the toxicity control options, and confirm the reduction in effluent toxicity. This Provision includes requirements for the Discharger to develop and submit a TRE Workplan and includes procedures for accelerated chronic toxicity monitoring and TRE initiation.
- i. **Toxicity Reduction Evaluation (TRE) Workplan.** Within 90 days of the effective date of this Order, the Discharger shall submit to the Regional Water Board a TRE Workplan for approval by the Executive Officer. The TRE Workplan shall outline the procedures for identifying the source(s) of, and reducing or eliminating effluent toxicity. The TRE Workplan must be

developed in accordance with USEPA guidance¹ and be of adequate detail to allow the Discharger to immediately initiate a TRE as required in this Provision.

- ii. **Accelerated Monitoring and TRE Initiation.** When the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity monitoring, and the testing meets all test acceptability criteria, the Discharger shall initiate accelerated monitoring as required in the Accelerated Monitoring Specifications. The Discharger shall initiate a TRE to address effluent toxicity if any WET testing results exceed the numeric toxicity monitoring trigger during accelerated monitoring.
- iii. **Numeric Toxicity Monitoring Trigger.** The numeric toxicity monitoring trigger to initiate a TRE is $> 1 \text{ TU}_c$ (where $\text{TU}_c = 100/\text{NOEC}$). The monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Discharger is required to begin accelerated monitoring and initiate a TRE when the effluent exhibits a pattern of toxicity.
- iv. **Accelerated Monitoring Specifications.** If the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity testing, the Discharger shall initiate accelerated monitoring within 14 days of notification by the laboratory of the exceedance. Accelerated monitoring shall consist of four (4) chronic toxicity tests conducted once every 2 weeks using the species that exhibited toxicity. The following protocol shall be used for accelerated monitoring and TRE initiation:
 - (a) If the results of four (4) consecutive accelerated monitoring tests do not exceed the monitoring trigger, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring. However, notwithstanding the accelerated monitoring results, if there is adequate evidence of a pattern of effluent toxicity, the Executive Officer may require that the Discharger initiate a TRE.
 - (b) If the source(s) of the toxicity is easily identified (e.g., temporary plant upset), the Discharger shall make necessary corrections to the facility and shall continue accelerated monitoring until four (4) consecutive accelerated tests do not exceed the monitoring trigger. Upon confirmation that the effluent toxicity has been removed, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring.
 - (c) If the result of any accelerated toxicity test exceeds the monitoring trigger, the Discharger shall cease accelerated monitoring and begin a TRE to investigate the cause(s) of, and identify corrective actions to reduce or eliminate effluent toxicity. Within thirty (30) days of notification by the laboratory of any test result exceeding the monitoring trigger during

¹ See the Fact Sheet (Attachment F, Section VII.B.2.a. for a list of USEPA guidance documents that must be considered in the development of the TRE Workplan.)

accelerated monitoring, the Discharger shall submit a TRE Action Plan to the Regional Water Board including, at minimum:

- (1) Specific actions the Discharger will take to investigate and identify the cause(s) of toxicity, including a TRE WET monitoring schedule;
- (2) Specific actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and
- (3) A schedule for these actions.

3. Best Management Practices and Pollution Prevention

- a. **Salinity Evaluation and Minimization Plan.** The Discharger shall prepare and implement a salinity evaluation and minimization plan to address sources of salinity from the Facility. The plan shall be completed and submitted to the Regional Water Board **within 9 months of the adoption date of this Order** for the approval by the Executive Officer.
- b. **Mercury Evaluation and Minimization Plan.** The Discharger shall prepare and implement a mercury evaluation and minimization plan to address sources of mercury from the Facility. The plan shall be completed and submitted to the Regional Water Board **within 9 months of the adoption date of this Order** for the approval by the Executive Officer.

4. Construction, Operation and Maintenance Specifications

- a. **Ultraviolet Disinfection (UV) System Operating Specifications.** The Discharger shall operate the UV disinfection system to provide a minimum UV dose per bank of 100 millijoules per square centimeter (mJ/cm²) at peak daily flow, unless otherwise approved by the California Department of Public Health, and shall maintain an adequate dose for disinfection while discharging to Western Pacific Interceptor Drainage Canal, unless otherwise approved by the California Department of Public Health.
 - i. The Discharger shall provide continuous, reliable monitoring of flow, UV transmittance, UV power, and turbidity.
 - ii. The Discharger shall operate the treatment system to insure that turbidity prior to disinfection shall not exceed 2.2 NTU as a daily average, and 5 NTU more than 5 percent of the time within a 24-hour period, and 10 NTU, at any time.
 - iii. The UV transmittance (at 254 nanometers) in the wastewater exiting the UV disinfection system shall not fall below 55 percent of maximum at any time.
 - iv. The quartz sleeves and cleaning system components must be visually inspected per the manufacturer's operations manual for physical wear

(scoring, solarization, seal leaks, cleaning fluid levels, etc.) and to check the efficacy of the cleaning system.

- v. The lamp sleeves must be cleaned periodically as necessary to meet the requirements.
- vi. Lamps must be replaced per the manufacturer's operations manual, or sooner, if there are indications the lamps are failing to provide adequate disinfection. Lamp age and lamp replacement records must be maintained.
- vii. The Facility must be operated in accordance with an operations and maintenance program that assures adequate disinfection.

b. Treatment Pond Operating Requirements.

- i. The treatment facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
- ii. Public contact with wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.
- iii. Ponds shall be managed to prevent breeding of mosquitoes. In particular,
 - (a) An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.
 - (b) Weeds shall be minimized.
 - (c) Dead algae, vegetation, and debris shall not accumulate on the water surface.
- iv. Freeboard shall never be less than 2 feet (measured vertically to the lowest point of overflow).

c. Request for Flow Increase. In the previous NPDES permit the Regional Water Board approved a discharge flow increase to 5.1 mgd. The current treatment plant capacity is 3.0 mgd. The Discharger is constructing a facility expansion (Phase 2 project) to increase the treatment capacity to 5.1 mgd. The permitted average dry weather flow may increase to 5.1 mgd upon compliance with the following conditions:

- i. **Effluent and Receiving Water Limitation Compliance.** The discharge shall demonstrate compliance with Final Effluent Limitations IV.A.1. and Receiving Water Limitations V.A; and
- ii. **Pretreatment Program.** The Discharger shall have developed and received Regional Water Board approval of an Industrial Pretreatment Program, in accordance with 40 CFR Part 403; and

- iii. **Facility Improvements.** The Discharger shall have a licensed engineer certify that construction of the Phase 2 improvements are complete, as identified in the Fact Sheet (Attachment F, section II.E.); and
- iv. **Request for Increase.** The Discharger shall submit to the Regional Water Board a request for an increase in the permitted average dry weather flow, which demonstrates compliance with items i. through iii., above. The increase in the permitted discharge flow rate shall not be effective until the Executive Officer verifies compliance with Special Provisions VI.C.4.c. and approves the Discharger's request.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. Pretreatment Requirements (5.1 mgd).

- i. Under the current plant ADWF of 3.0 mgd a pretreatment program is not required. Prior to the Regional Water Board approval of an 5.1 mgd ADWF discharge, the Discharger must adopt an approved industrial pretreatment program.
- ii. The Discharger shall implement its approved pretreatment program and the program shall be an enforceable condition of this Order once Regional Water Board approves the increase to an 5.1 mgd ADWF. If the Discharger fails to perform the pretreatment functions, the Regional Water Board, the State Water Board or USEPA may take enforcement actions against the Discharger as authorized by the CWA.
- iii. The Discharger shall enforce the Pretreatment Standards promulgated under sections 307(b), 307(c), and 307(d) of the CWA. The Discharger shall perform the pretreatment functions required by 40 CFR Part 403 including, but not limited to:
 - (a) Adopting the legal authority required by 40 CFR 403.8(f)(1);
 - (b) Enforcing the Pretreatment Standards of 40 CFR 403.5 and 403.6;
 - (c) Implementing procedures to ensure compliance as required by 40 CFR 403.8(f)(2); and
 - (d) Providing funding and personnel for implementation and enforcement of the pretreatment program as required by 40 CFR 403.8(f)(3).
- iv. The Discharger shall implement, as more completely set forth in 40 CFR 403.5, the necessary legal authorities, programs, and controls to ensure that the following incompatible wastes are not introduced to the treatment system, where incompatible wastes are:
 - (e) Wastes which create a fire or explosion hazard in the treatment works;

- (f) Wastes which will cause corrosive structural damage to treatment works, but in no case wastes with a pH lower than 5.0, unless the works is specially designed to accommodate such wastes;
 - (g) Solid or viscous wastes in amounts which cause obstruction to flow in sewers, or which cause other interference with proper operation or treatment works;
 - (h) Any waste, including oxygen demanding pollutants (BOD, etc.), released in such volume or strength as to cause inhibition or disruption in the treatment works, and subsequent treatment process upset and loss of treatment efficiency;
 - (i) Heat in amounts that inhibit or disrupt biological activity in the treatment works, or that raise influent temperatures above 40°C (104°F), unless the Regional Water Board approves alternate temperature limits;
 - (j) Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
 - (k) Pollutants which result in the presence of toxic gases, vapors, or fumes within the treatment works in a quantity that may cause acute worker health and safety problems; and:
 - (l) Any trucked or hauled pollutants, except at points predesignated by the Discharger.
- v. The Discharger shall implement, as more completely set forth in 40 CFR 403.5, the legal authorities, programs, and controls necessary to ensure that indirect discharges do not introduce pollutants into the sewerage system that, either alone or in conjunction with a discharge or discharges from other sources:
- (a) Flow through the system to the receiving water in quantities or concentrations that cause a violation of this Order, or:
 - (b) Inhibit or disrupt treatment processes, treatment system operations, or sludge processes, use, or disposal and either cause a violation of this Order or prevent sludge use or disposal in accordance with this Order.

b. Sludge/Biosolids Discharge Specifications

- i. Collected screenings, residual sludge, biosolids, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer, and consistent with Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste, as set forth in Title 27, CCR, division 2, subdivision 1, section 20005, et seq. Removal for further treatment, disposal, or reuse at sites (e.g., landfill, composting sites, soil amendment sites) that are operated in accordance with valid waste

discharge requirements issued by a Regional Water Board will satisfy these specifications.

- ii. Sludge and solid waste shall be removed from screens, sumps, ponds, clarifiers, etc. as needed to ensure optimal plant performance.
- iii. The treatment of sludge generated at the Facility shall be confined to the Facility property and conducted in a manner that precludes infiltration of waste constituents into soils in a mass or concentration that will violate groundwater limitations in section V.B. of this Order. In addition, the storage of residual sludge, solid waste, and biosolids on Facility property shall be temporary and controlled, and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate groundwater limitations included in section V.B. of this Order.
- iv. The use and disposal of biosolids shall comply with existing federal and state laws and regulations, including permitting requirements and technical standards included in 40 CFR Part 503. If the State Water Board and the Regional Water Board are given the authority to implement regulations contained in 40 CFR Part 503, this Order may be reopened to incorporate appropriate time schedules and technical standards. The Discharger must comply with the standards and time schedules contained in 40 CFR Part 503 whether or not they have been incorporated into this Order.

c. Biosolids Disposal Requirements

- i. The Discharger shall comply with the Monitoring and Reporting Program for biosolids disposal contained in Attachment E.
- ii. Any proposed change in biosolids use or disposal practice from a previously approved practice shall be reported to the Executive Officer and USEPA Regional Administrator at least 90 days in advance of the change.
- iii. The Discharger is encouraged to comply with the "Manual of Good Practice for Agricultural Land Application of Biosolids" developed by the California Water Environment Association.

d. Biosolids Storage Requirements

- i. Facilities for the storage of Class B biosolids shall be located, designed and maintained to restrict public access to biosolids.
- ii. Biosolids storage facilities shall be designed and maintained to prevent washout or inundation from a storm or flood with a return frequency of 100 years.

iii. Biosolids storage facilities, which contain biosolids, shall be designed and maintained to contain all storm water falling on the biosolids storage area during a rainfall year with a return frequency of 100 years.

iv. Biosolids storage facilities shall be designed, maintained and operated to minimize the generation of leachate.

e. **Collection System.** On 2 May 2006, the State Water Board adopted State Water Board Order No. 2006-0003, a Statewide General WDR for Sanitary Sewer Systems. The Discharger shall be subject to the requirements of Order No. 2006-0003 and any future revisions thereto. Order No. 2006-0003 requires that all public agencies that currently own or operate sanitary sewer systems apply for coverage under the General WDR. The Discharger has applied for and has been approved for coverage under State Water Board Order 2006-0003 for operation of its wastewater collection system.

Regardless of the coverage obtained under Order No. 2006-0003, the Discharger's collection system is part of the treatment system that is subject to this Order. As such, pursuant to federal regulations, the Discharger must properly operate and maintain its collection system [40 CFR 122.41(e)], report any non-compliance [40 CFR 122.41(l)(6) and (7)], and mitigate any discharge from the collection system in violation of this Order [40 CFR 122.41(d)].

6. Other Special Provisions

a. Wastewater shall be oxidized, coagulated, filtered, and adequately disinfected pursuant to the Department of Public Health (DPH; formerly the Department of Health Services) reclamation criteria, CCR, Title 22, division 4, chapter 3, (Title 22), or equivalent.

7. Compliance Schedules

a. **Compliance Schedule for Final Maximum Daily Effluent Limitations for Ammonia.** The Discharger shall comply with the following time schedule to ensure compliance with the final maximum daily effluent limitations for ammonia (Effluent Limitations IV.A.1.a) . This compliance schedule is contingent upon the Discharger submitting a compliance schedule justification for ammonia **by the effective date of this Order**. The compliance schedule justification shall be in accordance with the application requirements specified in State Water Board's Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits (State Water Board Resolution 2008-0025):

Task

Date Due

i. Submit Method of Compliance Workplan/Schedule

Within 3 months after the effective date of this Order

ii. Submit and implement Pollution Prevention Plan (PPP)¹

Within 1 year of the effective date of this Order

<u>Task</u>	<u>Date Due</u>
iii. Progress Reports ²	1 June , annually, after approval of work plan until final compliance
iv. Full Compliance	Within 5 years after adoption of this Order

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- ¹ The PPP shall be prepared and implemented for ammonia, as appropriate, and shall meet the requirements specified in CWC section 13263.3.
- ² The progress reports shall detail what steps have been implemented towards achieving compliance with waste discharge requirements, including studies, construction progress, evaluation of measures implemented, and recommendations for additional measures as necessary to achieve full compliance by the final compliance date.

VII. COMPLIANCE DETERMINATION

- A. BOD₅ and TSS Effluent Limitations (Sections IV.A.1.a and IV.A.2.a).** Compliance with the final effluent limitations for BOD₅ and TSS required in Limitations and Discharge Requirements section IV.A.1.a shall be ascertained by 24-hour composite samples. Compliance with effluent limitations required in Limitations and Discharge Requirements section IV.A.1.b for percent removal shall be calculated using the arithmetic mean of BOD₅ and TSS in effluent samples collected over a monthly period as a percentage of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period.
- B. Total Mercury Mass Loading Effluent Limitations (Section IV.A.3.a)** The procedures for calculating mass loadings are as follows:
1. The total pollutant mass load for each individual calendar month shall be determined using an average of all concentration data collected that month and the corresponding total monthly flow. All effluent monitoring data collected under the monitoring and reporting program, pretreatment program and any special studies shall be used for these calculations. The total annual effluent mercury loading shall be the sum of the 12 calendar months.
 2. In calculating compliance, the Discharger shall count all non-detect measures at one-half of the detection level. If compliance with the effluent limitation is not attained due to the non-detect contribution, the Discharger shall improve and implement available analytical capabilities and compliance shall be evaluated with consideration of the detection limits.

C. Average Dry Weather Flow Effluent Limitations (Sections IV.A.1.e and IV.A.2.e).

The average dry weather discharge flow represents the daily average flow when groundwater is at or near normal and runoff is not occurring. Compliance with the average dry weather flow effluent limitations will be determined annually based on the average of the average daily flows over three consecutive dry weather months (e.g., July, August, and September).

D. Total Coliform Organisms Effluent Limitations (Sections IV.A.1.d and IV.A.2.d).

For each day that an effluent sample is collected and analyzed for total coliform organisms, the 7-day median shall be determined by calculating the median concentration of total coliform bacteria in the effluent utilizing the bacteriological results of the last 7 days. For example, if a sample is collected on a Wednesday, the result from that sampling event and all results from the previous 6 days (i.e., Tuesday, Monday, Sunday, Saturday, Friday, and Thursday) are used to calculate the 7-day median. If the 7-day median of total coliform organisms exceeds a most probable number (MPN) of 2.2 per 100 milliliters, the Discharger will be considered out of compliance.

E. Mass Effluent Limitations. The mass effluent limitations contained in Final Effluent Limitations IV.A.1.a and 2.a are based on the permitted average dry weather flow and calculated as follows:

$$\text{Mass (lbs/day)} = \text{Flow (mgd)} \times \text{Concentration (mg/L)} \times 8.34 \text{ (conversion factor)}$$

If the effluent flow exceeds the permitted average dry weather flow during wet-weather seasons, the effluent mass limitations contained in Final Effluent Limitations IV.A.1.a and 2.a shall not apply.

F. Chronic Whole Effluent Toxicity Effluent Limitation (Sections IV.A.1.f and IV.A.2.f),

Compliance with the accelerated monitoring and TRE/TIE provisions of Provision VI.C.2.a shall constitute compliance with the effluent limitation.

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ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ)

Also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$ where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

Average Monthly Effluent Limitation (AMEL)

The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL)

The highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Bioaccumulative

Those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Carcinogenic

Pollutants are substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV)

CV is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge

Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of 1 day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ)

DNQ are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

Dilution Credit

Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Effluent Concentration Allowance (ECA)

ECA is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in USEPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bays

Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration

The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries

Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in CWC section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Inland Surface Waters

All surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation

The highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation

The lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL)

The highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median

The middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the $n/2$ and $n/2+1$).

Method Detection Limit (MDL)

MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 CFR Part 136, Attachment B, revised as of 3 July 1999.

Minimum Level (ML)

ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone

Mixing Zone is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

Not Detected (ND)

Sample results which are less than the laboratory's MDL.

Ocean Waters

The territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

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26 March 2010

Persistent Pollutants

Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP)

PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to CWC section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention

Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State or Regional Water Board.

Reporting Level (RL)

RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

Satellite Collection System

The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

Source of Drinking Water

Any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

Standard Deviation (σ)

Standard Deviation is a measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:

x is the observed value;

μ is the arithmetic mean of the observed values; and

n is the number of samples.

Toxicity Reduction Evaluation (TRE)

TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

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26 March 2010

SITE LOCATION MAP

**OLIVEHURST PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT FACILITY
YUBA COUNTY**

TE N T A T I V E O R D E R 26 March 2010



ATTACHMENT D – STANDARD PROVISIONS

VIII. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 CFR 122.41(a).)
2. The Discharger shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 CFR 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 CFR 122.41(c).)

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 CFR 122.41(d).)

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 CFR 122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR 122.41(g).)

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 CFR 122.5(c).)

F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (40 CFR 122.41(i); CWC section 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 CFR 122.41(i)(1));
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 CFR 122.41(i)(2));
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 CFR 122.41(i)(3)); and
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location. (40 CFR 122.41(i)(4).)

G. Bypass

1. Definitions
 - a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR 122.41(m)(1)(i).)
 - b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR 122.41(m)(1)(ii).)
2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 CFR 122.41(m)(2).)

3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR 122.41(m)(4)(i)):
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR 122.41(m)(4)(i)(A));
 - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR 122.41(m)(4)(i)(B)); and
 - c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 CFR 122.41(m)(4)(i)(C).)
4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 CFR 122.41(m)(4)(ii).)
5. Notice
 - a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 CFR 122.41(m)(3)(i).)
 - b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 CFR 122.41(m)(3)(ii).)

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 CFR 122.41(n)(1).)

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was

caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 CFR 122.41(n)(2).)

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 CFR 122.41(n)(3)):
 - a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 CFR 122.41(n)(3)(i));
 - b. The permitted facility was, at the time, being properly operated (40 CFR 122.41(n)(3)(ii));
 - c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 CFR 122.41(n)(3)(iii)); and
 - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 CFR 122.41(n)(3)(iv).)
3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 CFR 122.41(n)(4).)

IX. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 CFR 122.41(f).)

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 CFR 122.41(b).)

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the CWC. (40 CFR 122.41(l)(3) and 122.61.)

X. STANDARD PROVISIONS – MONITORING

- A.** Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 CFR 122.41(j)(1).)
- B.** Monitoring results must be conducted according to test procedures under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503 unless other test procedures have been specified in this Order. (40 CFR 122.41(j)(4) and 122.44(i)(1)(iv).)

XI. STANDARD PROVISIONS – RECORDS

- E.** Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least 5 years (or longer as required by 40 CFR Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 CFR 122.41(j)(2).)

F. Records of monitoring information shall include:

- 1. The date, exact place, and time of sampling or measurements (40 CFR 122.41(j)(3)(i));
- 2. The individual(s) who performed the sampling or measurements (40 CFR 122.41(j)(3)(ii));
- 3. The date(s) analyses were performed (40 CFR 122.41(j)(3)(iii));
- 4. The individual(s) who performed the analyses (40 CFR 122.41(j)(3)(iv));
- 5. The analytical techniques or methods used (40 CFR 122.41(j)(3)(v)); and
- 6. The results of such analyses. (40 CFR 122.41(j)(3)(vi).)

G. Claims of confidentiality for the following information will be denied (40 CFR 122.7(b)):

- 1. The name and address of any permit applicant or Discharger (40 CFR 122.7(b)(1)); and
- 2. Permit applications and attachments, permits and effluent data. (40 CFR 122.7(b)(2).)

XII. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR 122.41(h); Wat. Code, § 13267.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 CFR 122.41(k).)
2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 CFR 122.22(a)(3).)
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 CFR 122.22(b)(1));
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 CFR 122.22(b)(2)); and
 - c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 CFR 122.22(b)(3).)
4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard

Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR 122.22(c).)

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.” (40 CFR 122.22(d).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 CFR 122.22(l)(4).)
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 CFR 122.41(l)(4)(i).)
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 CFR 122.41(l)(4)(ii).)
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR 122.41(l)(4)(iii).)

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 CFR 122.41(l)(5).)

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall

also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 CFR 122.41(l)(6)(i).)

2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 CFR 122.41(l)(6)(ii)):
 - a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR 122.41(l)(6)(ii)(A).)
 - b. Any upset that exceeds any effluent limitation in this Order. (40 CFR 122.41(l)(6)(ii)(B).)
3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR 122.41(l)(6)(iii).)

F. Planned Changes

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 CFR 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b) (40 CFR 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 CFR 122.41(l)(1)(ii).)
3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 CFR 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements. (40 CFR 122.41(l)(2).)

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 CFR 122.41(l)(7).)

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 CFR 122.41(l)(8).)

XIII. STANDARD PROVISIONS – ENFORCEMENT

- A.** The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, sections 13385, 13386, and 13387

XIV. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following (40 CFR 122.42(b)):

- 1.** Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the CWA if it were directly discharging those pollutants (40 CFR 122.42(b)(1)); and
- 2.** Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order. (40 CFR 122.42(b)(2).)
- 3.** Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 CFR 122.42(b)(3).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Title 40 of the Code of Federal Regulations (CFR), section 122.48 (40 CFR 122.48) requires that all NPDES permits specify monitoring and reporting requirements. California Water Code (CWC) sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This Monitoring and Reporting Program establishes monitoring and reporting requirements, which implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

- A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of this Regional Water Board.
- B. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.
- C. Chemical, bacteriological, and bioassay analyses of any material required by this Order shall be conducted by a laboratory certified for such analyses by the Department of Public Health (DPH; formerly the Department of Health Services). Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Regional Water Board. In the event a certified laboratory is not available to the Discharger for any onsite field measurements such as pH, turbidity, temperature and residual chlorine, such analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program for any onsite field measurements such as pH, turbidity, temperature and residual chlorine must be kept onsite in the treatment facility laboratory and shall be available for inspection by Regional Water Board staff. The Quality Assurance-Quality Control Program must conform to USEPA guidelines or to procedures approved by the Regional Water Board.
- D. All chemical, bacteriological and bioassay analyses of any material required by this Order shall be performed in a laboratory certified to perform such analyses by DPH. Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Regional Water Board. The Discharger shall institute a Quality Assurance-Quality Control Program for any onsite field measurements such as pH, turbidity, temperature and residual chlorine. A manual containing the steps followed in this program must be kept onsite and shall be available for inspection by Regional Water Board staff. The Discharger must demonstrate sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform these field measurements. The Quality Assurance-Quality Control

Program must conform to USEPA guidelines or to procedures approved by the Regional Water Board.

- E. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least yearly, to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.
- F. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this Monitoring and Reporting Program.
- G. Laboratories analyzing monitoring samples shall be certified by DPH, in accordance with the provision of CWC section 13176, and must include quality assurance/quality control data with their reports.
- H. The Discharger shall conduct analysis on any sample provided by USEPA as part of the Discharge Monitoring Quality Assurance (DMQA) program. The results of any such analysis shall be submitted to USEPA's DMQA manager.
- I. The Discharger shall file with the Regional Water Board technical reports on self-monitoring performed according to the detailed specifications contained in this Monitoring and Reporting Program.
- J. The results of all monitoring required by this Order shall be reported to the Regional Water Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order. Unless otherwise specified, discharge flows shall be reported in terms of the monthly average and the daily maximum discharge flows.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Location where a representative sample of the facility's influent can be obtained, prior to any additives, treatment processes, and plant return flows. (39° 04' 02.3" N, 121° 33' 06.0" W)

001	EFF-001	Location where a representative sample of the facility's effluent can be obtained prior to discharge into the Western Pacific Interceptor Drainage Canal (39° 03' 57.5" N, 121° 33' 08.5" W)
--	RSW-001	100 feet Upstream of Discharge Point No. 001 from the Western Pacific Interceptor Drainage Canal (39° 03' 58.8" N, 121° 33' 08.8" W)
--	RSW-002	500 feet Downstream of Discharge Point No. 001 from the Western Pacific Interceptor Drainage Canal (39° 03' 53.4" N, 121° 33' 07.6" W)
--	BIO-001	Representative sample location for biosolids
--	SPL-001	A location where a representative sample for the municipal water supply can be collected. If the water supply is from more than one source, a flow weighted average should be calculated.

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

- The Discharger shall monitor influent to the facility at INF-001 as follows:

Table E-2. Influent Monitoring for INF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Meter	Continuous	²
pH	Standard Units	Grab ¹	1/Day	²
BOD 5-day @ 20 °C	mg/L	24-hr Composite ³	2/Week	²
Total Suspended Solids (TSS)	mg/L	24-hr Composite ³	2/Week	²
Electrical Conductivity @ 25 °C	µmhos/cm	Grab ¹	1/Quarter	²
Total Dissolved Solids (TDS) ⁴	mg/L	Grab ¹	1/Quarter	²

¹ Grab samples shall not be collected at the same time each day.

² Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; where no methods are specified for a given pollutant, by methods approved by the Regional Water Board or the State Water Board.

³ 24-hour flow proportional composite.

⁴ Concurrent with electrical conductivity monitoring.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

- The Discharger shall monitor tertiary treated effluent at EFF-001 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level:

Table E-3. Effluent Monitoring for EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Meter	Continuous	1
pH ²	standard units	Grab ³	1/Day	1
Temperature ²	°F (°C)	Grab ³	1/Day	1
BOD 5-day @ 20 °C	mg/L	24-hr Composite ⁴	2/Week	1
Total Suspended Solids (TSS)	mg/L	24-hr Composite ⁴	2/Week	1
Total Coliform Organisms	MPN/100 mL	Grab ³	2/Week	1
Ammonia (as N) ^{2,5,6}	mg/L	Grab ³	1/Week	1
Electrical Conductivity @ 25 °C	µmhos/cm	24-hr Composite ⁴	1/Week	1
Settleable Solids	mL/L	24-hr Composite ⁴	1/Month	1
Hardness (as CaCO ₃)	mg/L	24-hr Composite ⁴	1/Month	1
Total Dissolved Solids (TDS) ⁷	mg/L	24-hr Composite ⁴	1/Month	1
Mercury (total recoverable)	ng/L	Grab ³	1/Month	8
Mercury (methyl)	ng/L	Grab ³	1/Quarter	8
Nitrate (as N)	mg/L	Grab ³	1/Month	1
Nitrite (as N)	mg/L	Grab ³	1/Month	1
Tetrachloroethene	µg/L	Grab ³	1/Month	1
Total Chlorine Residual ^{9,10}	mg/L	Grab or Meter ³	1/Day or Continuous	1

¹ Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; where no methods are specified for a given pollutant, by methods approved by the Regional Water Board or the State Water Board.

² pH and temperature shall be recorded at the time of sample collection.

³ Grab samples shall not be collected at the same time each day.

⁴ 24-hour flow proportioned composite.

⁵ Report as total and un-ionized ammonia.

⁶ Concurrent with whole effluent toxicity monitoring.

⁷ Concurrent with electrical conductivity monitoring.

⁸ Unfiltered methyl mercury and total mercury samples shall be taken using clean hands/dirty hands procedures, as described in U.S. EPA method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels, for collection of equipment blanks (section 9.4.4.2), and shall be analyzed by U.S. EPA method 1630/1631 (Revision E) with a method detection limit of 0.02 ng/l for methylmercury and 0.2 ng/l for total mercury.

⁹ Total chlorine residual must be monitored with a method sensitive to and accurate at the permitted level of 0.01 mg/L. Monitoring for chlorine residual is only required when the WWTF is using chlorine for maintenance purposes. If chlorine is scheduled to be used, the Discharger shall monitor chlorine residual one week prior to use and one week after the end of use.

¹⁰ Under Order R5-2004-0094, the Discharger was required to monitor for total chlorine residual continuously. The Discharger no longer uses chlorine for effluent disinfection; therefore, chlorine monitoring is required at a

minimum of once per day when chlorine is used for maintenance purposes. For this Order the Discharger has requested continued use of the presently installed chlorine residual monitoring equipment. Since continuous monitoring provides a more robust data set than a daily grab sample continuous monitoring can be conducted in place of a once per day grab sample.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Acute Toxicity Testing. The Discharger shall conduct acute toxicity testing to determine whether the effluent is contributing acute toxicity to the receiving water. The Discharger shall meet the following acute toxicity testing requirements:

1. Monitoring Frequency – The Discharger shall perform quarterly acute toxicity testing, concurrent with effluent ammonia sampling.
2. Sample Types – For static non-renewal and static renewal testing, the samples shall be grab samples and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at the effluent monitoring location EFF-001.
3. Test Species – Test species shall be fathead minnows (*Pimephales promelas*).
4. Methods – The acute toxicity testing samples shall be analyzed using EPA-821-R-02-012, Fifth Edition. Temperature, total residual chlorine, and pH shall be recorded at the time of sample collection. No pH adjustment may be made unless approved by the Executive Officer.
5. Test Failure – If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger must re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.

B. Chronic Toxicity Testing. The Discharger shall conduct three species chronic toxicity testing to determine whether the effluent is contributing chronic toxicity to the receiving water. The Discharger shall meet the following chronic toxicity testing requirements:

1. Monitoring Frequency – The Discharger shall perform quarterly three species chronic toxicity testing.
2. Sample Types – Effluent samples shall be flow proportional 24-hour composites and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at the effluent monitoring location EFF-001. The receiving water control shall be a grab sample obtained from the RSW-001 sampling location, as identified in this Monitoring and Reporting Program.
3. Sample Volumes – Adequate sample volumes shall be collected to provide renewal water to complete the test in the event that the discharge is intermittent.

4. **Test Species** – Chronic toxicity testing measures sublethal (e.g., reduced growth, reproduction) and/or lethal effects to test organisms exposed to an effluent compared to that of the control organisms. The Discharger shall conduct chronic toxicity tests with:
 - The cladoceran, water flea, *Ceriodaphnia dubia* (survival and reproduction test);
 - The fathead minnow, *Pimephales promelas* (larval survival and growth test); and
 - The green alga, *Selenastrum capricornutum* (growth test).
5. **Methods** – The presence of chronic toxicity shall be estimated as specified in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition*, EPA/821-R-02-013, October 2002.
6. **Reference Toxicant** – As required by the SIP, all chronic toxicity tests shall be conducted with concurrent testing with a reference toxicant and shall be reported with the chronic toxicity test results.
7. **Dilutions** – For regular and accelerated chronic toxicity testing it is not necessary to perform the test using a dilution series. The test may be performed using 100% effluent. For TRE monitoring, the chronic toxicity testing shall be performed using the dilution series identified in Table E-4, below. The receiving water control shall be used as the diluent (unless the receiving water is toxic).

Table E-4. Chronic Toxicity Testing Dilution Series

Sample	Dilutions (%)					Controls	
	100	75	50	25	12.5	Receiving Water	Laboratory Water
% Effluent	100	75	50	25	12.5	0	0
% Receiving Water	0	25	50	75	87.5	100	0
% Laboratory Water	0	0	0	0	0	0	100

8. **Test Failure** – The Discharger must re-sample and re-test as soon as possible, but no later than fourteen (14) days after receiving notification of a test failure. A test failure is defined as follows:
 - a. The reference toxicant test or the effluent test does not meet all test acceptability criteria as specified in the *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition*, EPA/821-R-02-013, October 2002 (Method Manual), and its subsequent amendments or revisions; or
 - b. The percent minimum significant difference (PMSD) measured for the test exceeds the upper PMSD bound variability criterion in Table 6 on page 52 of the Method Manual. (A retest is only required in this case if the test results do not

exceed the monitoring trigger specified in the Special Provision at section VI. 2.a.iii. of the Order.)

- C. WET Testing Notification Requirements.** The Discharger shall notify the Regional Water Board within 24-hours after the receipt of test results exceeding the monitoring trigger during regular or accelerated monitoring, or an exceedance of the acute toxicity effluent limitation.
- D. WET Testing Reporting Requirements.** All toxicity test reports shall include the contracting laboratory's complete report provided to the Discharger and shall be in accordance with the appropriate "Report Preparation and Test Review" sections of the method manuals. At a minimum, whole effluent toxicity monitoring shall be reported as follows:
- 1. Chronic WET Reporting.** Regular chronic toxicity monitoring results shall be reported to the Regional Water Board within 30 days following completion of the test, and shall contain, at minimum:
 - a. The results expressed in TUC, measured as 100/NOEC, and also measured as 100/LC50, 100/EC25, 100/IC25, and 100/IC50, as appropriate.
 - b. The statistical methods used to calculate endpoints;
 - c. The statistical output page, which includes the calculation of the percent minimum significant difference (PMSD);
 - d. The dates of sample collection and initiation of each toxicity test; and
 - e. The results compared to the numeric toxicity monitoring trigger.

Additionally, the monthly discharger self-monitoring reports shall contain an updated chronology of chronic toxicity test results expressed in TUC, and organized by test species, type of test (survival, growth or reproduction), and monitoring frequency, i.e., either quarterly, monthly, accelerated, or Toxicity Reduction Evaluation (TRE).
 - 2. Acute WET Reporting.** Acute toxicity test results shall be submitted with the monthly discharger self-monitoring reports and reported as percent survival.
 - 3. TRE Reporting.** Reports for TREs shall be submitted in accordance with the schedule contained in the Discharger's approved TRE Workplan.
 - 4. Quality Assurance (QA).** The Discharger must provide the following information for QA purposes *(if applicable)*:
 - a. Results of the applicable reference toxicant data with the statistical output page giving the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD, and dates tested.

- b. The reference toxicant control charts for each endpoint, which include summaries of reference toxicant tests performed by the contracting laboratory.
- c. Any information on deviations or problems encountered and how they were dealt with.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECLAMATION MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

A. Surface Water Monitoring Location RSW-001 and RSW-002

1. The Discharger shall monitor the Western Pacific Interceptor Drainage Canal at RSW-001 and RSW-002 as follows:

Table E-5. Receiving Water Monitoring Requirements for RSW-001 and RSW-002

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Dissolved Oxygen	mg/L	Grab ¹	1/Week ²	³
pH ⁴	standard units	Grab ¹	1/Week ²	³
Temperature ⁴	°F (°C)	Grab ¹	1/Week ²	³
Electrical Conductivity @ 25°C	µmhos/cm	Grab ¹	1/Week ²	³
Hardness	mg/L CaCO ₃	Grab ¹	1/Month ²	³
Total Dissolved Solids (TDS) ⁵	mg/L	Grab ¹	1/Month ²	³

¹ Grab samples shall not be collected at the same time each day.

² Monitoring must be concurrent with the effluent discharge.

³ Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; where no methods are specified for a given pollutant, by methods approved by the Regional Water Board or the State Water Board.

⁴ pH and temperature shall be recorded at the time of sample collection.

⁵ Concurrent with electrical conductivity monitoring.

IX. OTHER MONITORING REQUIREMENTS

A. Biosolids

1. Monitoring Location BIO-001

- a. A composite sample of sludge shall be collected once per permit term until the second phase of construction is completed bring the average dry weather flow to 5.1 mgd where the sampling frequency increases to annually at Monitoring

Location BIO-001 in accordance with EPA's *POTW Sludge Sampling and Analysis Guidance Document*, August 1989, and tested for priority pollutants listed in 40 CFR Part 122, Appendix D, Tables II and III (excluding total phenols).

- b. A composite sample of sludge shall be collected annually until the second phase of construction is completed bring the average dry weather flow to 5.1 mgd where the sampling frequency increases to quarterly at Monitoring Location BIO-001 in accordance with USEPA's *POTW Sludge Sampling and Analysis Guidance Document*, August 1989, and tested for the metals listed in Title 22.
- c. Sampling records shall be retained for a minimum of 5 years. A log shall be maintained of sludge quantities generated and of handling and disposal activities. The frequency of entries is discretionary; however, the log must be complete enough to serve as a basis for part of the annual report.

B. Municipal Water Supply

1. Monitoring Location SPL-001

The Discharger shall monitor the municipal water supply at SPL-001 as follows. A sampling station shall be established where a representative sample of the municipal water supply can be obtained. Municipal water supply samples shall be collected at approximately the same time as effluent samples.

Table E-6. Municipal Water Supply Monitoring Requirements for SPL-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Dissolved Solids (TDS) ¹	mg/L	Grab	1/Month	²
Electrical Conductivity @ 25 °C ¹	µmhos/cm	Grab	1/Month	²
Standard Minerals ³	mg/L	Grab	1/Year	²

¹ If the water supply is from more than one source, the total dissolved solids and electrical conductivity shall be reported as a weighted average and include copies of supporting calculations.

² Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; where no methods are specified for a given pollutant, by methods approved by the Regional Water Board or the State Water Board.

³ Standard minerals shall include the following: boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series), and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).

C. Ultraviolet Light Disinfection System

- 1. Ultraviolet Light (UV) Disinfection System Monitoring.** The Discharger shall monitor the UV disinfection system as follows:

Table E-7. Ultraviolet Light Disinfection System Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow rate ¹	mgd	Meter	Continuous
Turbidity ^{1,2}	NTU	Meter	Continuous
Number of UV banks in operation	Number	Meter	Continuous
UV Transmittance ^{1,4,5}	Percent (%)	Meter	Continuous
UV Power Setting	Percent (%)	Meter	Continuous
UV Dose ³	MW-sec/cm ²	Calculated	Continuous

¹ To be monitored at EFF-001.

² Report daily average and maximum turbidity. If the influent exceeds 10 NTU, collect a sample for total coliform at EFF-001 and report the duration of the turbidity exceedance.

³ Report daily minimum UV dose, daily average UV dose, and weekly average UV dose. If effluent discharge has received less than the minimum UV dose and is not diverted from discharging to the Western Pacific Interceptor Drainage Canal, report the duration associated with each incident.

⁴ The Discharger shall report documented routine meter maintenance activities, including date, time of day, duration, in which the UV transmittance analyzer(s) is not in operation to record monitoring information

⁵ The UV transmittance analyzer can be out of service for calibration no more than 2 hours. One UV transmittance sample shall be collected and analyzed. Grab sample results will then be entered into the UV control system as the value used for UV dose calculation.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

- The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
- Upon written request of the Regional Water Board, the Discharger shall submit a summary monitoring report. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).
- 3. Compliance Time Schedules.** For compliance time schedules included in the Order, the Discharger shall submit to the Regional Water Board, on or before each compliance due date, the specified document or a written report detailing compliance or noncompliance with the specific date and task. If noncompliance is reported, the Discharger shall state the reasons for noncompliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the compliance time schedule.
- The Discharger shall report to the Regional Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of

reporting the data to the Commission pursuant to section 313 of the "*Emergency Planning and Community Right to Know Act*" of 1986.

5. **Calendar Year Annual Average Effluent Limits.** The Discharger shall report the calculated annual average monitoring results in the December SMR.

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State Water Board or the Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.
2. The Discharger shall report in the SMR the results for all monitoring specified in this Monitoring and Reporting Program under sections III through IX. The Discharger shall submit monthly SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.
3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-8. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On:	Monitoring Period	SMR Due Date
Continuous	First day of the calendar month following the permit effective date	All	Submit with monthly SMR
1/Day	First day of the calendar month following the permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with monthly SMR
2/Week	First Sunday of the calendar month following the permit effective date	Sunday through Saturday	Submit with monthly SMR
1/Week	First Sunday of the calendar month following the permit effective date	Sunday through Saturday	Submit with monthly SMR
1/Month	First calendar month following permit effective date	First day of calendar month through last day of calendar month	First day of second calendar month following month of sampling
1/Quarter	Closest of 1 January, 1 April, 1 July, or 1 October following	1 January through 31 March 1 April through 30 June	30 days from the end of the monitoring

Sampling Frequency	Monitoring Period Begins On:	Monitoring Period	SMR Due Date
	(or on) permit effective date	1 July through 30 September 1 October through 31 December	period
1/Year	1 January following (or on) permit effective date	1 January through 31 December	30 days from the end of the monitoring period

4. Reporting Protocols. The Discharger shall report with each sample result the applicable reported Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR Part 136.

The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
- d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

5. Compliance Determination. Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and in Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional Water Board and the State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

- 6. Multiple Sample Data.** When determining compliance with an AMEL, AWEL, or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of “Detected, but Not Quantified” (DNQ) or “Not Detected” (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:
- The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
 - The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.
- 7.** The Discharger shall submit SMRs in accordance with the following requirements:
- The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.
 - The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.
 - SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:
- Regional Water Quality Control Board
Central Valley Region
NPDES Compliance and Enforcement Unit
11020 Sun Center Dr., Suite #200
Rancho Cordova, CA 95670-6114
- 8.** Reports must clearly show when discharging to EFF-001 or other permitted discharge locations. Reports must show the date and time that the discharge started and stopped at each location.

C. Discharge Monitoring Reports (DMRs)

1. As described in section X.B.1 above, at any time during the term of this permit, the State Water Board or Regional Water Board may notify the Discharger to electronically submit SMRs that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs). Until such notification is given, the Discharger shall submit DMRs in accordance with the requirements described below.
2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharger shall submit the original DMR and one copy of the DMR to the address listed below:

STANDARD MAIL	FEDEX/UPS/ OTHER PRIVATE CARRIERS
State Water Resources Control Board Division of Water Quality c/o DMR Processing Center PO Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality c/o DMR Processing Center 1001 I Street, 15 th Floor Sacramento, CA 95814

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated will not be accepted unless they follow the exact same format of EPA Form 3320-1.

D. Other Reports

1. The Discharger shall report the results of any special studies, acute and chronic toxicity testing, and TRE/TIE required by Special Provisions VI.C.2 of this Order.
2. **Analytical Methods Report.** Within 60 days of permit adoption, the Discharger shall submit a report outlining minimum levels, method detection limits, and analytical methods for approval, with a goal to achieve detection levels below applicable water quality criteria. At a minimum, the Discharger shall comply with the monitoring requirements for CTR constituents as outlined in section 2.3 and 2.4 of the SIP.
3. The Discharger's sanitary sewer system collects wastewater using sewers, pipes, pumps, and/or other conveyance systems and directs the raw sewage to the wastewater treatment plant. A "sanitary sewer overflow" is defined as a discharge to ground or surface water from the sanitary sewer system at any point upstream of the wastewater treatment plant. Sanitary sewer overflows are prohibited by this Order. All violations must be reported as required in Standard Provisions. Facilities (such as wet wells, regulated impoundments, tanks, highlines, etc.) may be part of a sanitary sewer system and discharges to these facilities are not considered sanitary sewer overflows, provided that the waste is fully contained within these temporary storage facilities.

- 4. Effluent and Receiving Water Characterization Report.** An effluent and receiving water monitoring study is required to ensure adequate information is available for the next permit renewal. During the second year of this permit term, the Discharger shall conduct quarterly monitoring of the effluent at EFF-001 and of the receiving water at RSW-001 for all priority pollutants and other constituents of concern as described in Attachment H. Dioxin and Furan sampling shall be performed only twice during the year, as described in Attachment H.

During the third year of of this permit term, the Dischager shall conduct quaterly monitoring of the effluent at EFF-001 and of the receiving water at RSW-001 for all constituents that were detected once or more during the prior year of quarterly sampling. This includes all constituents that were reported as an estimated value (J-flagged). Dioxin and Furan sampling shall be performed twice during the 3rd year for any of the Dioxin and/or Furan constituents detected or estimated during the 2nd year semi-annual sampling events. The report shall be completed in conformance with the following schedule.

Task	Compliance Date
Submit Work Plan and Time Schedule	18 months from the adoption of this Order
Conduct Quarterly Sampling of All Priority Polutants and Constituents of Concern	During 2 nd year of permit term
Conduct Quarterly Sampling of Constituents Detected During the 2 nd Permit Term Year Quarterly Sampling Including Estimated Values (J-Flags)	During 3 rd year of permit term
Submit Final Report	Six months following completion of monitoring events

- 5. Annual Operations Report.** By 30 January of each year, the Discharger shall submit a written report containing the following:
- The names, certificate grades, and general responsibilities of all persons employed at the Facility.
 - The names and telephone numbers of persons to contact regarding the plant for emergency and routine situations.
 - A statement certifying when the flow meter(s) and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration.
 - A statement certifying whether the current operation and maintenance manual, and contingency plan, reflect the wastewater treatment plant as currently constructed and operated, and the dates when these documents were last revised and last reviewed for adequacy.

- e. The Discharger may also be requested to submit an annual report to the Regional Water Board with both tabular and graphical summaries of the monitoring data obtained during the previous year. Any such request shall be made in writing. The report shall discuss the compliance record. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with the waste discharge requirements.

- 6. Annual Pretreatment Reporting Requirements.** Once the Discharger completes the Phase 2 construction to increase the average dry weather flow 5.1 mgd, the Annual Pretreatment Reporting Requirements apply to this permit. The Discharger shall then submit annually a report to the Regional Water Board, with copies to USEPA Region 9 and the State Water Board, describing the Discharger's pretreatment activities over the previous 12 months. In the event that the Discharger is not in compliance with any conditions or requirements of this Order, including noncompliance with pretreatment audit/compliance inspection requirements, then the Discharger shall also include the reasons for noncompliance and state how and when the Discharger shall comply with such conditions and requirements.

An annual report shall be submitted by **28 February** and include at least the following items:

- a. A summary of analytical results from representative, flow proportioned, 24-hour composite sampling of the POTW's influent and effluent for those pollutants USEPA has identified under section 307(a) of the CWA which are known or suspected to be discharged by industrial users.

Sludge shall be sampled during the same 24-hour period and analyzed for the same pollutants as the influent and effluent sampling and analysis. The sludge analyzed shall be a composite sample of a minimum of 12 discrete samples taken at equal time intervals over the 24-hour period. Wastewater and sludge sampling and analysis shall be performed at least annually. The discharger shall also provide any influent, effluent or sludge monitoring data for nonpriority pollutants which may be causing or contributing to Interference, Pass-Through or adversely impacting sludge quality. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto.

- b. A discussion of Upset, Interference, or Pass-Through incidents, if any, at the treatment plant, which the Discharger knows or suspects were caused by industrial users of the POTW. The discussion shall include the reasons why the incidents occurred, the corrective actions taken and, if known, the name and address of, the industrial user(s) responsible. The discussion shall also include a review of the applicable pollutant limitations to determine whether any additional limitations, or changes to existing requirements, may be necessary to prevent Pass-Through, Interference, or noncompliance with sludge disposal requirements.

- c. The cumulative number of industrial users that the Discharger has notified regarding Baseline Monitoring Reports and the cumulative number of industrial user responses.
- d. An updated list of the Discharger's industrial users including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The Discharger shall provide a brief explanation for each deletion. The list shall identify the industrial users subject to federal categorical standards by specifying which set(s) of standards are applicable. The list shall indicate which categorical industries, or specific pollutants from each industry, are subject to local limitations that are more stringent than the federal categorical standards. The Discharger shall also list the noncategorical industrial users that are subject only to local discharge limitations. The Discharger shall characterize the compliance status through the year of record of each industrial user by employing the following descriptions:
 - i. complied with baseline monitoring report requirements (where applicable);
 - ii. consistently achieved compliance;
 - iii. inconsistently achieved compliance;
 - iv. significantly violated applicable pretreatment requirements as defined by 40 CFR 403.8(f)(2)(vii);
 - v. complied with schedule to achieve compliance (include the date final compliance is required);
 - vi. did not achieve compliance and not on a compliance schedule; and
 - vii. compliance status unknown.

A report describing the compliance status of each industrial user characterized by the descriptions in items iii. through vii. above shall be submitted for each calendar quarter **within 21 days of the end of the quarter**. The report shall identify the specific compliance status of each such industrial user and shall also identify the compliance status of the POTW with regards to audit/pretreatment compliance inspection requirements. If none of the aforementioned conditions exist, at a minimum, a letter indicating that all industries are in compliance and no violations or changes to the pretreatment program have occurred during the quarter must be submitted. The information required in the fourth quarter report shall be included as part of the annual report. This quarterly reporting requirement shall commence upon issuance of this Order.

- e. A summary of the inspection and sampling activities conducted by the Discharger during the past year to gather information and data regarding the industrial users. The summary shall include:

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- i. the names and addresses of the industrial users subjected to surveillance and an explanation of whether they were inspected, sampled, or both and the frequency of these activities at each user; and
 - ii. the conclusions or results from the inspection or sampling of each industrial user.
- f. A summary of the compliance and enforcement activities during the past year. The summary shall include the names and addresses of the industrial users affected by the following actions:
 - i. Warning letters or notices of violation regarding the industrial users' apparent noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the apparent violation concerned the federal categorical standards or local discharge limitations.
 - ii. Administrative orders regarding the industrial users noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations.
 - iii. Civil actions regarding the industrial users' noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations.
 - iv. Criminal actions regarding the industrial users noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations.
 - v. Assessment of monetary penalties. For each industrial user identify the amount of the penalties.
 - vi. Restriction of flow to the POTW.
 - vii. Disconnection from discharge to the POTW.
- g. A description of any significant changes in operating the pretreatment program which differ from the information in the Discharger's approved Pretreatment Program including, but not limited to, changes concerning: the program's administrative structure, local industrial discharge limitations, monitoring program or monitoring frequencies, legal authority or enforcement policy, funding mechanisms, resource requirements, or staffing levels.
- h. A summary of the annual pretreatment budget, including the cost of pretreatment program functions and equipment purchases.

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Duplicate signed copies of these Pretreatment Program reports shall be submitted to the Regional Water Board and the:

State Water Resources Control Board
Division of Water Quality
1001 I Street or P.O. Box 100
Sacramento, CA 95812

and the

Regional Administrator
U.S. Environmental Protection Agency W-5
75 Hawthorne Street
San Francisco, CA 94105

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ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described in the Findings in section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California. Only those sections or subsections of this Order that are specifically identified as “not applicable” have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to this Discharger.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

Table F-1. Facility Information

WDID	5A580102001
Discharger	Olivehurst Public Utility District
Name of Facility	Wastewater Treatment Facility
Facility Address	3908 Mary Avenue
	Olivehurst, CA 95961
	Yuba County
Facility Contact, Title and Phone	Greg Axline, Chief Plant Operator, (530) 682-7841
Authorized Person to Sign and Submit Reports	Greg Axline, Chief Plant Operator, (530) 682-7841
Mailing Address	1970 9 th Avenue, PO Box 670, Olivehurst, CA 95961
Billing Address	1970 9 th Avenue, PO Box 670, Olivehurst, CA 95961
Type of Facility	Publicly owned treatment works (POTW)
Major or Minor Facility	Major
Threat to Water Quality	2
Complexity	A
Pretreatment Program	No
Reclamation Requirements	None
Facility Permitted Flow	5.1 million gallons per day (mgd)
Current Facility Design Flow	3.0 mgd
Watershed	Tributary to the Bear River
Receiving Water	Western Pacific Interceptor Drainage Canal
Receiving Water Type	Inland surface water

- A.** Olivehurst Public Utility District (hereinafter Discharger) is the owner and operator of the Olivehurst Public Utility District Wastewater Treatment Facility (hereinafter Facility), a publicly owned treatment works.

For the purposes of this Order, references to the “discharger” or “permittee” in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

- B.** The Facility discharges wastewater to the Western Pacific Interceptor Drainage Canal, a water of the United States, and is currently regulated by Order No. R5-2004-0094 which was adopted on 9 July 2004 and expired on 1 July 2009. The terms and conditions of the current Order have been automatically continued and remain in effect until new Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit are adopted pursuant to this Order.
- C.** The Discharger filed a report of waste discharge and submitted an application for renewal of its WDRs and NPDES permit on 16 December 2008. Supplemental information was requested on 26 January 2009 and received on 29 January 2009.

II. FACILITY DESCRIPTION

The Discharger provides sewerage service for the communities of Olivehurst and Plumas Lake, serving a population of approximately 10,000. The design daily average flow capacity of the Facility is 3.0 million gallons per day (mgd).

A. Description of Wastewater and Biosolids Treatment or Controls

The treatment system consists of screening, grit removal, two oxidation ditches, three secondary clarifiers, equalization basin, tertiary filtration and ultraviolet disinfection to treat a design daily average flow of 3.0 mgd and design daily peak flow of 6.8 mgd. Sludge is treated in a sludge lagoon, dewatered in sludge drying beds, and hauled to a landfill for disposal.

B. Discharge Points and Receiving Waters

1. The Facility is located in Section 17, T14N, R4E, MDB&M, as shown in Attachment B, a part of this Order.
2. Treated municipal wastewater is discharged at Discharge Point No. 001 to Western Pacific Interceptor Drainage Canal, a water of the United States and a tributary to the Bear River at a point latitude 39° 03' 55" N and longitude 121° 32' 06" W.
3. The Western Pacific Interceptor Drainage Canal is an ephemeral stream, absent the discharge from the Facility. Dry conditions occur primarily in the summer months, but dry conditions may also occur throughout the year, particularly in low rainfall years.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Effluent limitations contained in Order No. R5-2004-0094 and No. R5-2004-0095 for discharges from Discharge Point No. 001 and representative monitoring data from the term of Order No. R5-2004-0094 and No. R5-2004-0095 are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation			Monitoring Data (From August 2006 To November 2008)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Median Weekly Discharge	Highest Daily Discharge
Flow	mgd	¹	--	²	1.9	--	4.3
BOD 5-day @ 20 °C	mg/L	10	15	20	95	--	380
Total Suspended Solids	mg/L	10	15	20	5.8	--	15
Total Coliform Organisms	MPN/ 100ml	--	2.2	23	--	50	500
Turbidity	NTU	--	--	5 (2 – daily average)	1.3	--	4.3
Dibromochloromethane	µg/L	0.41	--	0.82	<0.5	--	<0.5
Dichlorobromomethane	µg/L	0.56	--	1.1	<0.5	--	<0.5
Tetrachloroethene	µg/L	0.8	--	2.0	1.8	--	1.8
Bis(2-ethylhexyl)phthalate	µg/L	1.8	--	3.6	<5	--	<5
Copper	µg/L	³	--	³	4.6	--	4.6
Aluminum	µg/L	58	--	161	<50	--	<50
Iron	µg/L	300	--	--	65	--	--
Manganese	µg/L	50	--	--	22	--	--
Tributyltin	µg/L	0.043	--	0.13	<0.06	--	<0.06
Methylene Blue Active Substances (MBAS)	µg/L	500	--	--	<100	--	--
Nitrate (as N)	µg/L	10,000	--	--	9,100	--	--
Nitrite (as N)	µg/L	1,000	--	--	370	--	--
Sulfate	µg/L	250,000	--	--	36,000	--	--
Organochloride Pesticides	µg/L	--	--	ND	--	--	ND
Total Trihalomethanes	µg/L	80	--	--	<0.5	--	--
Ammonia	mg/L	³	--	³	1.0	--	6.7

¹ Design flow for Phase 1 is 3.0 mgd and for Phase 2 is 5.1 mgd.

² Daily peak flow for Phase 1 is 6.8 mgd and for Phase 2 is 10.8 mgd.

³ Average monthly and maximum daily limits vary based on effluent pH and temperature for ammonia and effluent hardness for copper.

D. Compliance Summary

From January 2000 to November 2007 there were a total of 44 violations subject to mandatory minimum penalties for discharge exceedances of coliform, settleable solids, pH, dibromochloromethane and BOD.

E. Planned Changes

Order No R5-2004-0094 permitted the Discharger to expand and upgrade the WWTP from 1.8 mgd to 3.0 mgd as part of the Phase 1 expansion. This expansion was completed in 2006 and the upgraded WWTP came online in mid-August 2006. A

second expansion (Phase 2) was planned for completion in late 2007; however, with the downturn in the housing market and economy Phase 2 was not implemented. This permit includes effluent limitations for both current operational design and Phase 2. Beyond the Phase 2 expansion that is currently on hold there are no other planned changes for the WWTP.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the applicable plans, policies, and regulations identified in the Findings in section II of this Order. The applicable plans, policies, and regulations relevant to the discharge include the following:

A. Legal Authorities

This Order is issued pursuant to regulations in the Clean Water Act (CWA) and the California Water Code (CWC) as specified in the Finding contained at section II.C of this Order.

B. California Environmental Quality Act (CEQA)

This Order meets the requirements of CEQA as specified in the Finding contained at section II.E of this Order.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** This Order implements the following water quality control plans as specified in the Finding contained at section II.H of this Order.
 - a. *Water Quality Control Plan, Fourth Edition (Revised February 2007), for the Sacramento and San Joaquin River Basins* (Basin Plan).
2. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** This Order implements the NTR and CTR as specified in the Finding contained at section II.I of this Order.
3. **State Implementation Policy (SIP).** This Order implements the SIP as specified in the Finding contained at section II.I of this Order.
4. **Alaska Rule.** This Order is consistent with the Alaska Rule as specified in the Finding contained at section II.L of this Order.
5. **Antidegradation Policy.** As specified in the Finding contained at section II.N of this Order and as discussed in detail in the Fact Sheet (Attachment F, section IV.D.4.), the discharge is consistent with the antidegradation provisions of 40 CFR section 131.12 and State Water Resources Control Board (State Water Board) Resolution 68-16.
6. **Anti-Backsliding Requirements.** This Order is consistent with anti-backsliding policies as specified in the Finding contained at section II.M of this Order.

Compliance with the anti-backsliding requirements is discussed in the Fact Sheet (Attachment F, section IV.D.3).

7. Emergency Planning and Community Right to Know Act

Section 13263.6(a) of the CWC, requires that *“the Regional Water Board shall prescribe effluent limitations as part of the waste discharge requirements of a POTW for all substances that the most recent toxic chemical release data reported to the state emergency response commission pursuant to section 313 of the Emergency Planning and Community Right to Know Act of 1986 (42 U.S.C. Sec. 11023) (EPCRA) indicate as discharged into the POTW, for which the State Water Board or the Regional Water Board has established numeric water quality objectives, and has determined that the discharge is or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to, an excursion above any numeric water quality objective”*.

The most recent toxic chemical data report does not indicate any reportable off-site releases or discharges to the collection system for this Facility. Therefore, a reasonable potential analysis based on information from EPCRA cannot be conducted. Based on information from EPCRA, there is no reasonable potential to cause or contribute to an excursion above any numeric water quality objectives included within the Basin Plan or in any State Water Board plan, so no effluent limitations are included in this permit pursuant to CWC section 13263.6(a).

However, as detailed elsewhere in this Order, available effluent data indicate that there are constituents present in the effluent that have a reasonable potential to cause or contribute to exceedances of water quality standards and require inclusion of effluent limitations based on federal and state laws and regulations.

8. Storm Water Requirements

USEPA promulgated federal regulations for storm water on 16 November 1990 in 40 CFR Parts 122, 123, and 124. The NPDES Industrial Storm Water Program regulates storm water discharges from wastewater treatment facilities. Wastewater treatment plants are applicable industries under the storm water program and are obligated to comply with the federal regulations.

- 9. Endangered Species Act.** This Order is consistent with the Endangered Species Act as specified in the Finding contained at section II.P of this Order.

D. Impaired Water Bodies on CWA 303(d) List

1. Under section 303(d) of the 1972 CWA, states, territories and authorized tribes are required to develop lists of water quality limited segments. The waters on these lists do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. On 30 November 2006 USEPA gave final approval to California's 2006 section 303(d) List of Water Quality Limited Segments. The Basin Plan references this list of Water

Quality Limited Segments (WQLSs), which are defined as “...*those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 CFR Part 130, et seq.)*.” The Basin Plan also states, “*Additional treatment beyond minimum federal standards will be imposed on dischargers to [WQLSs]. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment.*” The listing for the the Bear River, which the Western Pacific Interceptor Drainage Canal is tributary to, includes diazinon.

2. **Total Maximum Daily Loads (TMDLs).** USEPA requires the Regional Water Board to develop TMDLs for each 303(d) listed pollutant and water body combination. The TMDL for diazinon is currently under development and scheduled for Board hearing in 2010.
3. The 303(d) listings and TMDLs have been considered in the development of the Order. A pollutant-by-pollutant evaluation of each pollutant of concern is described in section VI.C.3. of this Fact Sheet.

E. Other Plans, Policies and Regulations

1. The discharge authorized herein and the treatment and storage facilities associated with the discharge of treated municipal wastewater, except for discharges of residual sludge and solid waste, are exempt from the requirements of Title 27, California Code of Regulations (CCR), section 20005 *et seq.*, pursuant to Title 27 CCR section 20090(a).

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

Effluent limitations and toxic and pretreatment effluent standards established pursuant to sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 304 (Information and Guidelines), and 307 (Toxic and Pretreatment Effluent Standards) of the CWA and amendments thereto are applicable to the discharge.

The CWA mandates the implementation of effluent limitations that are as stringent as necessary to meet water quality standards established pursuant to state or federal law [33 U.S.C., §1311(b)(1)(C); 40 CFR 122.44(d)(1)]. NPDES permits must incorporate discharge limits necessary to ensure that water quality standards are met. This requirement applies to narrative criteria as well as to criteria specifying maximum amounts of particular pollutants. Pursuant to federal regulations, 40 CFR 122.44(d)(1)(i), NPDES permits must contain limits that control all pollutants that “*are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality.*” Federal regulations, 40 CFR 122.44(d)(1)(vi), further provide that “[w]here a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or

contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits."

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 CFR 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR 122.44(d) requires that permits include WQBELs to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water where numeric water quality objectives have not been established. The Basin Plan at page IV-17.00, contains an implementation policy, "*Policy for Application of Water Quality Objectives*", that specifies that the Regional Water Board "*will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives.*" This Policy complies with 40 CFR 122.44(d)(1). With respect to narrative objectives, the Regional Water Board must establish effluent limitations using one or more of three specified sources, including: (1) USEPA's published water quality criteria, (2) a proposed state criterion (i.e., water quality objective) or an explicit state policy interpreting its narrative water quality criteria (i.e., the Regional Water Board's "*Policy for Application of Water Quality Objectives*") (40 CFR 122.44(d)(1)(vi)(A), (B) or (C)), or (3) an indicator parameter.

The Basin Plan includes numeric site-specific water quality objectives and narrative objectives for toxicity, chemical constituents, discoloration, radionuclides, and tastes and odors. The narrative toxicity objective states: "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.*" (Basin Plan at III-8.00.) The Basin Plan states that material and relevant information, including numeric criteria, and recommendations from other agencies and scientific literature will be utilized in evaluating compliance with the narrative toxicity objective. The narrative chemical constituents objective states that waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses. At minimum, "*...water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs)*" in Title 22 of CCR. The Basin Plan further states that, to protect all beneficial uses, the Regional Water Board may apply limits more stringent than MCLs. The narrative tastes and odors objective states: "*Water shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to domestic or municipal water supplies or to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses.*"

A. Discharge Prohibitions

1. As stated in section I.G of Attachment D, Standard Provisions, this Order prohibits bypass from any portion of the treatment facility. Federal regulations, 40 CFR 122.41(m), define "bypass" as the intentional diversion of waste streams from any portion of a treatment facility. This section of the federal regulations, 40 CFR 122.41(m)(4), prohibits bypass unless it is unavoidable to prevent loss of life, personal injury, or severe property damage. In considering the Regional Water

Board's prohibition of bypasses, the State Water Board adopted a precedential decision, Order No. WQO 2002-0015, which cites the federal regulations, 40 CFR 122.41(m), as allowing bypass only for essential maintenance to assure efficient operation.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at 40 CFR 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR Part 133.

Regulations promulgated in 40 CFR 125.3(a)(1) require technology-based effluent limitations for municipal Dischargers to be placed in NPDES permits based on Secondary Treatment Standards or Equivalent to Secondary Treatment Standards.

The Federal Water Pollution Control Act Amendments of 1972 (PL 92-500) established the minimum performance requirements for POTWs [defined in section 304(d)(1)]. Section 301(b)(1)(B) of that Act requires that such treatment works must, as a minimum, meet effluent limitations based on secondary treatment as defined by the USEPA Administrator.

Based on this statutory requirement, USEPA developed secondary treatment regulations, which are specified in 40 CFR Part 133. These technology-based regulations apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of 5-day biochemical oxygen demand (BOD₅), total suspended solids (TSS), and pH.

2. Applicable Technology-Based Effluent Limitations

- a. BOD₅ and TSS.** Federal regulations, 40 CFR Part 133, establish the minimum weekly and monthly average level of effluent quality attainable by secondary treatment for BOD₅ and TSS. Tertiary treatment is necessary to protect the beneficial uses of the receiving stream and the final effluent limitations for BOD₅ and TSS are based on the technical capability of the tertiary process. BOD₅ is a measure of the amount of oxygen used in the biochemical oxidation of organic matter. The secondary and tertiary treatment standards for BOD₅ and TSS are indicators of the effectiveness of the treatment processes. The principal design parameter for wastewater treatment plants is the daily BOD₅ and TSS loading rates and the corresponding removal rate of the system. In applying 40 CFR Part 133 for weekly and monthly average BOD₅ and TSS limitations, the application of tertiary treatment processes results in the ability to achieve lower levels for BOD₅ and TSS than the secondary standards currently prescribed; the 30-day average BOD₅ and TSS limitations have been revised to 10 mg/L, which

is technically based on the capability of a tertiary system. In addition to the average weekly and average monthly effluent limitations, a daily maximum effluent limitation for BOD₅ and TSS is included in the Order to ensure that the treatment works are not organically overloaded and operate in accordance with design capabilities. In addition, 40 CFR 133.102, in describing the minimum level of effluent quality attainable by secondary treatment, states that the 30-day average percent removal shall not be less than 85 percent. If 85 percent removal of BOD₅ and TSS must be achieved by a secondary treatment plant, it must also be achieved by a tertiary (i.e., treatment beyond secondary level) treatment plant. This Order contains a limitation requiring an average of 85 percent removal of BOD₅ and TSS over each calendar month.

b. Flow. The Facility was designed to provide a tertiary level of treatment for up to a design flow of 3.0 mgd. Therefore, this Order contains an average dry weather discharge flow effluent limit of 3.0 mgd.

c. pH. The secondary treatment regulations at 40 CFR Part 133 also require that pH be maintained between 6.0 and 9.0 standard units (SU).

Summary of Technology-Based Effluent Limitations Discharge Point No. 001

Table F-3. Summary of Technology-Based Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow	mgd	3.0 ¹	--	6.8	--	--
		5.1 ²	--	10.8	--	--
BOD ₅ @ 20 °C ³	mg/L	10	15	20	--	--
	lbs/day ⁴ (3.0 mgd)	250	380	500	--	--
	lbs/day ⁵ (5.1 mgd)	430	640	850	--	--
Total Suspended Solids ³	mg/L	10	15	20	--	--
	lbs/day ⁴ (3.0 mgd)	250	380	500	--	--
	lbs/day ⁵ (5.1 mgd)	430	640	850	--	--
pH	SU	--	--	--	6.0 ⁶	9.0 ⁶

¹ Average dry weather flow of 3.0 mgd.

² Average dry weather flow of 5.1 mgd.

³ The average monthly percent removal of BOD 5-day 20 °C and total suspended solids shall not be less than 85 percent.

⁴ Based upon an average dry weather treatment design flow of 3.0 mgd.

⁵ Based upon an average dry weather treatment design flow of 5.1 mgd.

⁶ More stringent water quality-based effluent limitations have been applied for pH in this Order.

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C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and 40 CFR 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. This Order contains requirements, expressed as a technology equivalence requirement, more stringent than secondary treatment requirements that are necessary to meet applicable water quality standards. The rationale for these requirements, which consist of tertiary treatment, is discussed in section IV.C.3.c.vi of this Fact Sheet.

40 CFR 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply.

The Basin Plan on page II-1.00 states: "*Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning...*" and with respect to disposal of wastewaters states that "*...disposal of wastewaters is [not] a prohibited use of waters of the State; it is merely a use which cannot be satisfied to the detriment of beneficial uses.*"

The federal CWA section 101(a)(2), states: “*it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water be achieved by July 1, 1983.*” Federal Regulations, developed to implement the requirements of the CWA, create a rebuttable presumption that all waters be designated as fishable and swimmable. Federal Regulations, 40 CFR sections 131.2 and 131.10, require that all waters of the State regulated to protect the beneficial uses of public water supply, protection and propagation of fish, shell fish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation. Section 131.3(e), 40 CFR, defines existing beneficial uses as those uses actually attained after 28 November 1975, whether or not they are included in the water quality standards. Federal Regulation, 40 CFR section 131.10 requires that uses be obtained by implementing effluent limitations, requires that all downstream uses be protected and states that in no case shall a state adopt waste transport or waste assimilation as a beneficial use for any waters of the United States.

- a. Receiving Water and Beneficial Uses.** The receiving stream is the Western Pacific Interceptor Drainage Canal, a water of the United States and a tributary to the Bear River within the Sacramento River Basin.

The Basin Plan at II-2.00 states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. The Basin Plan does not specifically identify beneficial uses for Western Pacific Interceptor Drainage Canal, but does identify present and potential uses for Bear River to which the Western Pacific Interceptor Drainage Canal is tributary. Thus, beneficial uses applicable to the Western Pacific Interceptor Drainage Canal are as follows:

Table F-4. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Western Pacific Interceptor Drainage Canal	<p><u>Existing:</u> Municipal and domestic supply (MUN), agricultural supply (AGR), hydropower generation (POW), water contact recreation (REC-1), non-contact water recreation (REC-2), warm freshwater habitat (WARM); cold freshwater habitat (COLD), wildlife habitat (WILD).</p> <p><u>Potential:</u> Migration of aquatic organisms (MIGR) and spawning, reproduction and/or early development of fish (SPWN).</p>

- b. Effluent and Ambient Background Data.** The reasonable potential analysis (RPA), as described in section IV.C.3 of this Fact Sheet, was based on data from 1 September 2006 through 17 February 2009, which includes effluent and ambient background data submitted in the Report of Waste Discharge (ROWD). With the plant expansion and upgrade from secondary to tertiary treatment data prior to 1 September 2006 was not used in the RPA.

c. Priority Pollutant Metals

- i. **Hardness-Dependent CTR Metals Criteria.** The *California Toxics Rule* and the *National Toxics Rule* contain water quality criteria for seven metals that vary as a function of hardness. The lower the hardness the lower the water quality criteria. The metals with hardness-dependent criteria include cadmium, copper, chromium III, lead, nickel, silver, and zinc.

This Order has established the criteria for hardness-dependent metals based on the reasonable worst-case ambient hardness as required by the SIP¹, the CTR² and State Water Board Order No. WQO 2008-0008 (City of Davis). The SIP and the CTR require the use of “receiving water” or “actual ambient” hardness, respectively, to determine effluent limitations for these metals. (SIP, § 1.2; 40 CFR § 131.38(c)(4), Table 4, note 4.) The CTR does not define whether the term “ambient,” as applied in the regulations, necessarily requires the consideration of upstream as opposed to downstream hardness conditions. Therefore, where reliable, representative data are available, the hardness value for calculating criteria can be the downstream receiving water hardness, after mixing with the effluent (Order WQO 2008-0008, p. 11). The Regional Water Board thus has considerable discretion in determining ambient hardness (*Id.*, p.10.).

Upstream receiving water hardness data is not available. The collection of upstream receiving water hardness data was not required under Order No. R5-2004-0094. Since the Western Pacific Interceptor Drainage Canal is an ephemeral stream, there are periods of no flow in the canal and the receiving water is effluent dominated. Therefore, the reasonable worst-case downstream ambient hardness has been estimated based on the minimum effluent hardness. The effluent hardness ranged from 101 mg/L to 175 mg/L (as CaCO₃), based on 67 samples from December 2005 to February 2009. This Order uses a hardness of 101 mg/L (as CaCO₃) to calculate CTR hardness-dependent metals criteria for conducting the reasonable potential analysis and for calculating WQBELs, if needed. This Order requires upstream and downstream receiving water hardness monitoring. This Order may be reopened, as necessary, to re-evaluate the implementation of the CTR hardness-dependent metals criteria based on the receiving water hardness data.

- ii. **Conversion Factors.** The CTR contains aquatic life criteria for cadmium, chromium III, copper, lead, nickel, silver, and zinc which are presented in dissolved concentrations. USEPA recommends conversion factors to translate dissolved concentrations to total concentrations. The default

¹ The SIP does not address how to determine the hardness for application to the equations for the protection of aquatic life when using hardness-dependent metals criteria. It simply states, in Section 1.2, that the criteria shall be properly adjusted for hardness using the hardness of the receiving water.

² The CTR requires that, for waters with a hardness of 400 mg/L (as CaCO₃), or less, the actual ambient hardness of the surface water must be used. It further requires that the hardness values used must be consistent with the design discharge conditions for design flows and mixing zones.

USEPA conversion factors contained in Appendix 3 of the SIP were used to convert the applicable dissolved criteria to total recoverable criteria. For other metals where the criteria is not hardness-dependent, the criteria is typically expressed in dissolved concentrations as well (e.g., iron, manganese, arsenic, etc.). A conservative conversion factor of 1.0 has been used in this Order to convert the dissolved metals criteria to total metals concentrations. The SIP allows for the development of site-specific translators to convert from dissolved to total metals concentrations. The Discharger has not conducted site-specific translator studies. However, this Order includes a reopener provision that allows the permit to be reopened to consider the use of site-specific translators should the Discharger conduct the necessary studies.

3. Determining the Need for WQBELs

- a. The Regional Water Board conducted the RPA in accordance with section 1.3 of the SIP. Although the SIP applies directly to the control of CTR priority pollutants, the State Water Board has held that the Regional Water Board may use the SIP as guidance for water quality-based toxics control.³ The SIP states in the introduction “*The goal of this Policy is to establish a standardized approach for permitting discharges of toxic pollutants to non-ocean surface waters in a manner that promotes statewide consistency.*” Therefore, unless otherwise stated, in this Order the RPA procedures from the SIP were used to evaluate reasonable potential for both CTR and non-CTR constituents based on information submitted as part of the application, in studies, and as directed by monitoring and reporting programs. Unless otherwise stated, the RPA for each constituent was conducted based on effluent data from September 2006 to February 2009 (i.e., since the Facility upgrades).
- b. **Constituents with No Reasonable Potential.** WQBELs are not included in this Order for constituents that do not demonstrate reasonable potential; however, monitoring for those pollutants is established in this Order as required by the SIP. If the results of effluent monitoring demonstrate reasonable potential, this Order may be reopened and modified by adding an appropriate effluent limitation. Based on new data and the procedures established in Section 1.3 of the SIP for determining reasonable potential, the discharge does not demonstrate reasonable potential to cause or contribute to an in-stream excursion for the following constituents:
 - i. **Aluminum.** The NAWQC includes a criterion of 87 µg/L for the protection of fresh water aquatic life, and is based on a 4-day average continuous concentration. Between August 2006 and February 2009, 31 effluent samples were collected and analyzed for aluminum. Aluminum was not detected (method detection limit of 50 µg/L) in all 31 samples. The Upstream receiving water has not been sampled by the Discharger. Based on this data and the procedures established in Section 1.3 of the SIP for determining reasonable potential, the discharge does not demonstrate reasonable

³ See Order WQO 2001-16 (Napa) and Order WQO 2004-0013 (Yuba City).

potential to cause or contribute to an in-stream excursion above the NAWQC water quality criterion for aluminum (see Attachment G Reasonable Potential Analysis).

- ii. **Bis(2-ethylhexyl)phthalate.** The CTR includes a criterion of 1.8 µg/L for the protection of human health and is based on a one-in-a-million cancer risk for waters from which both water and organisms are consumed. Between August 2006 and February 2009, 30 effluent samples were collected and analyzed for bis(2-ethylhexyl)phthalate. The Upstream receiving water has not been sampled by the Discharger. Of the 30 effluent samples there was one detection, but the value was less than the reporting level. The sample was estimated at 0.83 µg/L, which is less than the CTR criterion of 1.8 µg/L. Based on this data and the procedures established in Section 1.3 of the SIP for determining reasonable potential, the discharge does not demonstrate reasonable potential to cause or contribute to an in-stream excursion above CTR water quality criterion for bis(2-ethylhexyl)phthalate (see Attachment G Reasonable Potential Analysis).
- iii. **Chlorine Residual.** With the conversion to a UV disinfection system, chlorine is no longer used for disinfection purposes. The Discharger uses chlorine for maintenance purposes in the oxidation ditch to control foaming. However, the threat of a chlorine release is significantly less than with the previous chlorination/dechlorination process. Chlorine is only used for filamentous bacteria control in the oxidation ditch. It is used when filamentous bacteria have created problems with settleable solids testing and thirty to forty gallons of 12.5% chlorine by volume is mixed with water and sprayed onto the top of the 1.5 million gallon oxidation ditch usually over an 8 hour period. Based on continuous residual chlorine monitoring between September 2006 to February 2009, total residual chlorine has not been detected in the effluent discharge. Therefore, total residual chlorine no longer demonstrates reasonable potential and an effluent limitation is not necessary. However, since chlorine is highly toxic to aquatic life, this Order includes monitoring requirements for when chlorine is used for maintenance purposes. If chlorine is found to be in the effluent, this Order may be reopened for the addition of an effluent limitation for chlorine residual.
- iv. **Copper.** The CTR includes a criterion of 9.4 µg/L based on the lowest effluent hardness of 101 mg/L. Between August 2006 and February 2009, 32 effluent samples were collected and analyzed for copper. The Upstream receiving water has not been sampled by the Discharger. The maximum effluent concentration (MEC) for copper was 7.8 µg/L. Based on this data and the procedures established in Section 1.3 of the SIP for determining reasonable potential, the discharge does not demonstrate reasonable potential to cause or contribute to an in-stream excursion above CTR water quality criterion for copper (see Attachment G Reasonable Potential Analysis).

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- v. **Diazinon.** The Bear River is currently listed as a water quality limited segment (WQLS) for diazinon in the CWA section 303(d) list of impaired water bodies. In March 2000 the California Department of Fish and Game (CDFG) finalized water quality criteria for diazinon. The acute and chronic water quality criteria are 0.08 µg/l (1-hour average) and 0.05 µg/l (4 day average), respectively. The Regional Water Board uses these criteria in implementing the Basin Plan's narrative toxicity objective. Between August 2006 and February 2009, two effluent samples were collected and analyzed for diazinon. Diazinon was not detected (method detection limit of 0.03 µg/L) in the two samples. The Upstream receiving water has not been sampled by the Discharger. Based on this data and the procedures established in Section 1.3 of the SIP for determining reasonable potential, the discharge does not demonstrate reasonable potential to cause or contribute to an in-stream excursion above the Basin Plan's narrative toxicity objective for diazinon.
- vi. **Dibromochloromethane.** The CTR includes a criterion of 0.41 µg/L for the protection of human health and is based on a one-in-a-million cancer risk for waters from which both water and organisms are consumed. Between August 2006 and February 2009, 30 effluent samples were collected and analyzed for dibromochloromethane. Dibromochloromethane was not detected (method detection limit of 0.5 µg/L) in all 30 samples. The Upstream receiving water has not been sampled by the Discharger. Based on this data and the procedures established in Section 1.3 of the SIP for determining reasonable potential, the discharge does not demonstrate reasonable potential to cause or contribute to an in-stream excursion above CTR water quality criterion for dibromochloromethane (see Attachment G Reasonable Potential Analysis).
- vii. **Dichlorobromomethane.** The CTR includes a criterion of 0.56 µg/L for the protection of human health and is based on a one-in-a-million cancer risk for waters from which both water and organisms are consumed. Between August 2006 and February 2009, 30 effluent samples were collected and analyzed for dichlorobromomethane. Dichlorobromomethane was not detected (method detection limit of 0.5 µg/L) in all 30 samples. The Upstream receiving water has not been sampled by the Discharger. Based on this data and the procedures established in Section 1.3 of the SIP for determining reasonable potential, the discharge does not demonstrate reasonable potential to cause or contribute to an in-stream excursion above CTR water quality criterion for dichlorobromomethane (see Attachment G Reasonable Potential Analysis).
- viii. **Iron.** The secondary maximum contaminant level for iron is 300 µg/L. From a total of 31 samples collected between August 2006 and February 2009, the MEC for iron was 65 µg/L. The Upstream receiving water has not been sampled by the Discharger. Based on this data and the procedures established in Section 1.3 of the SIP for determining reasonable potential, the discharge does not demonstrate reasonable potential to cause or

contribute to an in-stream excursion above the iron secondary maximum contaminant level (see Attachment G Reasonable Potential Analysis).

- ix. Manganese.** The secondary maximum contaminant level for manganese is 50 µg/L. From a total of 31 samples collected between August 2006 and February 2009, the MEC for manganese was 22 µg/L. The Upstream receiving water has not been sampled by the Discharger. Based on this data and the procedures established in Section 1.3 of the SIP for determining reasonable potential, the discharge does not demonstrate reasonable potential to cause or contribute to an in-stream excursion above the manganese secondary maximum contaminant level (see Attachment G Reasonable Potential Analysis).

x. Mercury

- (a) WQO.** The current NAWQC for protection of freshwater aquatic life, continuous concentration, for mercury is 0.77 µg/L (30-day average, chronic criteria). The CTR contains a human health criterion (based on a threshold dose level causing neurological effects in infants) of 0.050 µg/L for waters from which both water and aquatic organisms are consumed. Both values are controversial and subject to change. In 40 CFR Part 131, USEPA acknowledges that the human health criteria may not be protective of some aquatic or endangered species and that “...*more stringent mercury limits may be determined and implemented through use of the State’s narrative criterion.*” In the CTR, USEPA reserved the mercury criteria for freshwater and aquatic life and may adopt new criteria at a later date.
- (b) RPA Results.** The maximum observed effluent mercury concentration was 0.0009 µg/L. The upstream receiving water has not been sampled for mercury. Based on this information the discharge does not have a reasonable potential to cause or contribute to an instream excursion of the applicable water quality objectives.
- (c) WQBELs.** On 11 June 2009, the Regional Water Board adopted Resolution No. R5-2009-0059 updating the Section 303(d) list of Water Quality Limited Segments for the Central Valley Region. The Lower Bear River has been identified as impaired for mercury in the June 2009 update. The Sacramento-San Joaquin Delta is also impaired for mercury and the Regional Water Board is nearing completion of a Methylmercury TMDL that proposes methylmercury load reductions for facilities discharging to Delta. Upon completion of the Delta Methylmercury TMDL, Regional Water Board staff will begin development of a TMDL to address the mercury impairment in the tributaries to the Delta, including the Lower Bear River.

The SIP states in Section 2.1.1 that, “For bioaccumulative priority pollutants for which the receiving water has been included on the CWA

Section 303(d) list, the RWQCB should consider whether the mass loading of the bioaccumulative pollutant(s) should be limited to representative, current levels pending TMDL development..." Although there is no reasonable potential for mercury based on the currently applicable water quality objectives, mercury is bioaccumulative and may impact waterways that are impaired downstream of the discharge. Therefore, this Order contains a performance-based mass effluent limitation of 0.78 lbs/year for mercury for the effluent discharged to the receiving water. This interim limitation is based on maintaining the mercury loading at the current level until a TMDL can be established or USEPA develops mercury standards that are protective of human health. This Order also requires the Discharger prepare and implement a mercury evaluation and minimization plan to address sources of mercury from the Facility. The performance-based effluent limitation was calculated as follows:

$$[\text{Maximum Effluent Concentration (mg/L)}] * [\text{Average Dry Weather Flow Rate}] * [8.34 \text{ (conversion factor)}] * [365 \text{ days}] = \text{lbs/year}$$

(d) Plant Performance and Attainability. The effluent limit is based on current plant performance. The Regional Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.

- xi. Methylene Blue Active Substances.** The secondary maximum contaminant level for methylene blue active substances (MBAS) is 500 µg/L. Between August 2006 and February 2009, 30 effluent samples were collected and analyzed for MBAS. MBAS was not detected (method detection limit of 0.1 µg/L) in all 30 samples. The Upstream receiving water has not been sampled by the Discharger. Based on this data and the procedures established in Section 1.3 of the SIP for determining reasonable potential, the discharge does not demonstrate reasonable potential to cause or contribute to an in-stream excursion above the MBAS secondary maximum contaminant level (see Attachment G Reasonable Potential Analysis).
- xii. Organochloride Pesticides.** The Basin Plan includes a water quality objective for pesticides on page III-6.0, which states: "No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses" and that "Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in water column at concentrations detectable within the accuracy of analytical methods approved by the Environmental Protection Agency or the Executive Officer". Between August 2006 and February 2009, 30 effluent samples were collected and analyzed for organochloride pesticides. Organochloride pesticides were not detected in all 30 samples. The Upstream receiving water has not been sampled by the Discharger. Based on this data and the procedures established in Section 1.3 of the SIP for determining reasonable

potential, the discharge does not demonstrate reasonable potential to cause or contribute to an in-stream excursion above Basin Plan requirements for organochloride pesticides (see Attachment G Reasonable Potential Analysis).

xiii. Salinity

- (a) **WQO.** The Basin Plan contains a chemical constituent objective that incorporates state MCLs, contains a narrative objective, and contains numeric water quality objectives for electrical conductivity, total dissolved solids, sulfate, and chloride.

Table F-5. Salinity Water Quality Criteria/Objectives

Parameter	RPA Screening Levels	Effluent		Receiving Water Range (Count)	Source Water Range (Count)
		Maximum Annual Average	Effluent Range (Count)		
EC (µmhos/cm)	700 ¹	619	350-991 (880)	51-728 (63)	264-407 (4)
TDS (mg/L)	450 ¹	412	320-488 (30)	n/a	198-278 (4)
Sulfate (mg/L)	250 ²	n/a	57-88 (2)	n/a	n/a
Chloride (mg/L)	106 ¹	38	17-78 (30)	n/a	n/a

¹ Agriculture Goal, R.S. Ayers and D.W. Westcot, Rome, 1985

² Secondary Maximum Contaminant Level (MCL)

n/a – Data not available or not enough data to calculate averages

- (1) **Chloride.** The secondary MCL for chloride is 250 mg/L, as a recommended level, 500 mg/L as an upper level, and 600 mg/L as a short-term maximum. The recommended agricultural water quality goal for chloride, that is used as a screening level, is 106 mg/L as a long-term average based on Water Quality for Agriculture, Food and Agriculture Organization of the United Nations—Irrigation and Drainage Paper No. 29, Rev. 1 (R.S. Ayers and D.W. Westcot, Rome, 1985). The 106 mg/L water quality goal is intended to protect against adverse effects on sensitive crops when irrigated via sprinklers. USEPA's National Ambient Water Quality Criteria for Chloride for the Protection of Freshwater Aquatic Life includes recommended criteria of 230 mg/L (chronic 4-day average) and 860 mg/L (acute 1-hour average).

- (2) **Electrical Conductivity.** The secondary MCL for EC is 900 µmhos/cm as a recommended level, 1600 µmhos/cm as an upper level, and 2200 µmhos/cm as a short-term maximum. The agricultural water quality goal, that is used as a screening level, is 700 µmhos/cm as a long-term average based on Water Quality for Agriculture, Food and Agriculture Organization of the United Nations—Irrigation and Drainage Paper No. 29, Rev. 1 (R.S. Ayers and D.W. Westcot, Rome,

1985). The 700 μ mhos/cm agricultural water quality goal is intended to prevent reduction in crop yield, i.e. a restriction on use of water, for salt-sensitive crops, such as beans, carrots, turnips, and strawberries. These crops are either currently grown in the area or may be grown in the future. Most other crops can tolerate higher EC concentrations without harm, however, as the salinity of the irrigation water increases, more crops are potentially harmed by the EC, or extra measures must be taken by the farmer to minimize or eliminate any harmful impacts.

(3) Sulfate. The secondary MCL for sulfate is 250 mg/L as a recommended level, 500 mg/L as an upper level, and 600 mg/L as a short-term maximum.

(4) Total Dissolved Solids. The secondary MCL for TDS is 500 mg/L as a recommended level, 1000 mg/L as an upper level, and 1500 mg/L as a short-term maximum. The recommended agricultural water quality goal for TDS, that is used as a screening level, is 450 mg/L as a long-term average based on Water Quality for Agriculture, Food and Agriculture Organization of the United Nations—Irrigation and Drainage Paper No. 29, Rev. 1 (R.S. Ayers and D.W. Westcot, Rome, 1985). Water Quality for Agriculture evaluates the impacts of salinity levels on crop tolerance and yield reduction, and establishes water quality goals that are protective of the agricultural uses. The 450 mg/L water quality goal is intended to prevent reduction in crop yield, i.e. a restriction on use of water, for salt-sensitive crops. Only the most salt sensitive crops require irrigation water of 450 mg/L or less to prevent loss of yield. Most other crops can tolerate higher TDS concentrations without harm, however, as the salinity of the irrigation water increases, more crops are potentially harmed by the TDS, or extra measures must be taken by the farmer to minimize or eliminate any harmful impacts.

(b) RPA Results.

(1) Chloride. Chloride concentrations in the effluent ranged from 57 mg/L to 88 mg/L, with an average of 73 mg/L. These levels do not exceed USEPA's recommended criteria, the Secondary MCL, or the agricultural screening level for chloride. Therefore, the discharge does not have reasonable potential for chloride.

(2) Electrical Conductivity. A review of the Discharger's monitoring reports shows a maximum annual average effluent EC of 619 μ mhos/cm. This does not exceed the Secondary MCL or the agricultural screening level. Therefore, the discharge does not have reasonable potential for EC.

(3) Sulfate. Sulfate concentrations in the effluent ranged from 17 mg/L to 36 mg/L, with an average of 22 mg/L. These levels do not exceed the

secondary MCL. Therefore, the discharge does not have reasonable potential for sulfate.

(4) Total Dissolved Solids. The maximum annual average TDS effluent concentration was 412 mg/L. This does not exceed the Secondary MCL or the agricultural screening level for TDS. Therefore, the discharge does not have reasonable potential for TDS.

(c) WQBELs.

Based on the low reported salinity, the discharge does not have reasonable potential to cause or contribute to an in-stream excursion of water quality objectives for salinity. However, since the Discharger discharges to the Western Pacific Interceptor Drainage Canal, a tributary of the Bear River and eventually the Sacramento-San Joaquin Delta, of additional concern is the salt contribution to Delta waters. Allowing the Discharger to increase its current salt loading may be contrary to the Region-wide effort to address salinity in the Central Valley. The municipal drinking water supply ranged from 264 to 407 $\mu\text{mhos/cm}$ between June 2007 and January 2009. A performance-based limit using water supply plus 500 $\mu\text{mhos/cm}$ would be greater than 700 $\mu\text{mhos/cm}$. Therefore, this Order includes a performance-based effluent limitation of 700 $\mu\text{mhos/cm}$ for EC to be applied as an annual average to limit the discharge to current levels. This interim performance-based effluent limitation represents the maximum annual average effluent EC concentration for a calendar year using data from 1 October 2006 through 28 February 2009. The maximum annual average of 619 $\mu\text{mhos/cm}$ occurred during the year 2007. Based on the sample results for the effluent, it appears the Discharger can meet these new limitations.

In order to ensure that the Discharger will continue to control the discharge of salinity, this Order includes a requirement to document past and future salinity minimization efforts. Also, water supply monitoring is required to evaluate the relative contribution of salinity from the source water to the effluent.

(d) Plant Performance and Attainability. The effluent limits for EC are performance-based, therefore the Regional Water Board concludes that immediate compliance with these effluent limitations is feasible.

xiv. Total Trihalomethanes. The primary maximum contaminant level for total trihalomethanes is 80 $\mu\text{g/L}$. Between August 2006 and February 2009, 27 effluent samples were collected and analyzed for total trihalomethanes. Total trihalomethanes was detected in one of the 27 samples at was estimated at 0.3 $\mu\text{g/L}$. The Upstream receiving water has not been sampled by the Discharger. Based on this data and the procedures established in Section 1.3 of the SIP for determining reasonable potential, the discharge does not demonstrate reasonable potential to cause or contribute to an in-

stream excursion above the primary maximum contaminant level for total trihalomethanes (see Attachment G Reasonable Potential Analysis).

- xv. **Tributyltin.** The NAWQC includes a criterion of 0.072 µg/L for the protection of fresh water aquatic life, and is based on a 4-day average continuous concentration. Between August 2006 and February 2009, 30 effluent samples were collected and analyzed for tributyltin. Tributyltin was not detected (method detection limit of 0.06 µg/L) in all 30 samples. The Upstream receiving water has not been sampled by the Discharger. Based on this data and the procedures established in Section 1.3 of the SIP for determining reasonable potential, the discharge does not demonstrate reasonable potential to cause or contribute to an in-stream excursion above NAWQC water quality criterion for tributyltin (see Attachment G Reasonable Potential Analysis).

- c. **Constituents with Reasonable Potential.** The Regional Water Board finds that the discharge has a reasonable potential to cause or contribute to an in-stream excursion above a water quality standard for ammonia, tetrachloroethene, nitrate, and nitrite. WQBELs for these constituents are included in this Order. A summary of the RPA is provided in Attachment G, and a detailed discussion of the RPA for each constituent is provided below.

i. **Ammonia**

- (a) **WQO.** The NAWQC for the protection of freshwater aquatic life for total ammonia, recommends acute (1-hour average; criteria maximum concentration or CMC) standards based on pH and chronic (30-day average; criteria continuous concentration or CCC) standards based on pH and temperature. USEPA also recommends that no 4-day average concentration should exceed 2.5 times the 30-day CCC. USEPA found that as pH increased, both the acute and chronic toxicity of ammonia increased. Salmonids were more sensitive to acute toxicity effects than other species. However, while the acute toxicity of ammonia was not influenced by temperature, it was found that invertebrates and young fish experienced increasing chronic toxicity effects with increasing temperature. Because the Bear River has a beneficial use of cold freshwater habitat and the presence of salmonids and early fish life stages in the Bear River is well-documented, the recommended criteria for waters where salmonids and early life stages are present were used.

Acute Criterion – The acute (1-hr) criterion varies as a function of pH; with ammonia toxicity increasing with pH. Previous Order No. R5-2004-0094 required an instantaneous maximum pH of 8.5, based on the Basin Plan's water quality objective for pH. Due to the short averaging period for acute criteria, the maximum permitted pH was used to calculate the acute criterion for ammonia.

The Discharger submitted a letter dated 4 March 2010 to the Regional

Water Board requesting the maximum permitted pH be lowered to 8.4, based on Facility performance over the past year. The Discharger believes the Facility can meet a lower instantaneous maximum effluent pH, which would result in a slightly less stringent acute criterion for ammonia. In 2007 and 2008 the Discharger used sodium hydroxide on a regular basis to help clean the collection system lines of grease build up. In 2008 the Discharger purchased a Vac-Con vacuum truck for cleaning and maintaining the collection system. By the end of 2008 the Discharger put the Vac-Con truck into service, reducing the need for sodium hydroxide. The Discharger has decided that in 2010 after it uses up the supply on hand, they will no longer use sodium hydroxide as a preventative maintenance tool, because the Discharger believes it contributed to the rise and change to the wastestream pH. The average pH in 2007 was 7.79 then it dropped slightly to 7.70 in 2008, followed by a more significant drop to 7.36 in 2009. However, there is insufficient information at this time to make the determination that the recent changes in sewer collection system maintenance will result in consistent compliance with a lower effluent pH.

Using a maximum permitted effluent pH of 8.5 (considering salmonids present), the acute criterion for ammonia is 2.14 mg/L (as N), as the Basin Plan objective for pH in the receiving stream is the range of 6.5 to 8.5. The instantaneous maximum pH limit was used to calculate the acute criterion in order to protect against the worst-case short-term exposure of an organism.

Chronic Criterion – The 30-day average chronic criterion varies as a function of pH and temperature. The maximum observed 30-day rolling average temperature and pH of the effluent were used to calculate the chronic criterion. The maximum observed 30-day average effluent temperature was 79.6°F (26.4°C), for the rolling 30-day period ending 7 August 2007. The maximum observed 30-day average effluent pH value was 7.99 on 8 August 2007, for the rolling 30-day period ending 26 August 2008. Using the maximum rolling average temperature and pH (considering early life stages of fishes present) the resulting 30-day chronic criterion is 1.13 mg/L (as N). The 4-day average concentration is derived in accordance with the USEPA criterion as 2.5 times the 30-day chronic criterion, which results in a 4-day average concentration of 2.83 mg/L (as N).

(b) RPA Results. Untreated domestic wastewater contains ammonia. Nitrification is a biological process that converts ammonia to nitrite and nitrite to nitrate. Denitrification is a process that converts nitrate to nitrite or nitric oxide and then to nitrous oxide or nitrogen gas, which is then released to the atmosphere. The Discharger does currently use nitrification to remove ammonia from the waste stream. Inadequate or incomplete nitrification may result in the discharge of ammonia to the

receiving stream. Ammonia is known to cause toxicity to aquatic organisms in surface waters. Discharges of ammonia would violate the Basin Plan narrative toxicity objective. The maximum effluent concentration (MEC) for ammonia was 6.7 µg/L. Therefore, ammonia in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the USEPA's NAWQC.

(c) WQBELs. The Regional Water Board calculates WQBELs in accordance with SIP procedures for non-CTR constituents, and ammonia is a non-CTR constituent. The SIP procedure assumes a 4-day averaging period for calculating the long-term average discharge condition (LTA). However, USEPA recommends modifying the procedure for calculating permit limits for ammonia using a 30-day averaging period for the calculation of the LTA corresponding to the 30-day CCC. Therefore, while the LTAs corresponding to the acute and 4-day chronic criteria were calculated according to SIP procedures, the LTA corresponding to the 30-day CCC was calculated assuming a 30-day averaging period. The lowest LTA representing the acute, 4-day CCC, and 30-day CCC is then selected for deriving the average monthly effluent limitation (AMEL) and the maximum daily effluent limitation (MDEL). The remainder of the WQBEL calculation for ammonia was performed according to the SIP procedures. This Order contains a final average monthly effluent limitation (AMEL) and maximum daily effluent limitation (MDEL) for Ammonia of 1.1 mg/L and 2.1 mg/L, respectively, based on the NAWQC.

(d) Plant Performance and Attainability. Analysis of the effluent data shows that the MEC of 6.7 µg/L is greater than applicable WQBELs. Therefore, a compliance schedule is included in this Order to allow the Discharger to address the ammonia concentrations. As discussed above, the Discharger believes the Facility can meet a lower instantaneous maximum effluent pH limit, which would allow for less stringent WQBELs for ammonia. Should the Discharger provide additional information indicating the the Facility can consistently comply with a lower instantaneous maximum effluent pH limit, this Order may be reopened to modify the pH limit and the WQBELs for ammonia, as appropriate.

ii. Tetrachloroethene

(a) WQO. The CTR includes a criterion of 0.8 µg/L for tetrachloroethene for the protection of human health for waters from which both water and organisms are consumed.

(b) RPA Results. The maximum effluent concentration (MEC) for tetrachloroethene was 1.8 µg/L. Therefore, tetrachloroethene in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criterion for the protection of human health.

(c) **WQBELs.** Due to no dilution, dilution credits are not allowed for development of the WQBELs for tetrachloroethene. This Order contains a final average monthly effluent limitation (AMEL) and maximum daily effluent limitation (MDEL) for tetrachloroethene of 0.8 µg/L and 1.6 µg/L, respectively, based on the CTR criterion for the protection of human health.

(d) **Plant Performance and Attainability.** Analysis of the effluent data shows that the MEC of 1.8 µg/L is greater than applicable WQBELs. Based on the sample collected on 17 February 2009 for the effluent, the limitations appear to put the Discharger in immediate non-compliance. However, this sample result is atypical for the discharge and of the 30 samples analyzed for tetrachloroethene over the past three and a half years all but two results were below the detection limit. Because of a low likelihood of an excursion above the limit and the two detections of tetrachloroethene just above the detection limits a compliance schedule is not included in this order.

iii. Nitrate and Nitrite

(a) **WQO.** DPH has adopted Primary MCLs for the protection of human health for nitrite and nitrate that are equal to 1 mg/L and 10 mg/L (measured as nitrogen), respectively. DPH has also adopted a primary MCL of 10,000 µg/L for the sum of nitrate and nitrite, measured as nitrogen.

USEPA has developed a primary MCL and an MCL goal of 1,000 µg/L for nitrite (as nitrogen). For nitrate, USEPA has developed Drinking Water Standards (10,000 µg/L as Primary MCL) and NAWQC for protection of human health (10,000 µg/L for non-cancer health effects). Recent toxicity studies have indicated a possibility that nitrate is toxic to aquatic organisms.

(b) **RPA Results.** Untreated domestic wastewater contains ammonia. Nitrification is a biological process that converts ammonia to nitrite and nitrite to nitrate. Denitrification is a process that converts nitrate to nitrite or nitric oxide and then to nitrous oxide or nitrogen gas, which is then released to the atmosphere. Nitrate and nitrite are known to cause adverse health effects in humans. Inadequate or incomplete denitrification may result in the discharge of nitrate and/or nitrite to the receiving stream. The conversion of ammonia to nitrites and the conversion of nitrites to nitrates present a reasonable potential for the discharge to cause or contribute to an in-stream excursion above the Primary MCLs for nitrite and nitrate.

(c) **WQBELs.** This Order contains a final average monthly effluent limitation (AMEL) for nitrate of 10 mg/L and an AMEL for nitrite of 1 mg/L, based on the protection of the Basin Plan's narrative chemical constituents objective

and to assure the treatment process adequately nitrifies and denitrifies the waste stream.

- (d) Plant Performance and Attainability.** Analysis of the effluent data shows that the MEC of 0.37 and 9.1 mg/L for nitrite and nitrate, respectively, is less than the WQBELs. The Regional Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.

iv. Pathogens

- (a) WQO.** DPH has developed reclamation criteria, CCR, Division 4, Chapter 3 (Title 22), for the reuse of wastewater. Title 22 requires that for spray irrigation of food crops, parks, playgrounds, schoolyards, and other areas of similar public access, wastewater be adequately disinfected, oxidized, coagulated, clarified, and filtered, and that the effluent total coliform levels not exceed 2.2 MPN/100 mL as a 7-day median. As coliform organisms are living and mobile, it is impracticable to quantify an exact number of coliform organisms and to establish weekly average limitations. Instead, coliform organisms are measured as a most probable number and regulated based on a 7-day median limitation.

Title 22 also requires that recycled water used as a source of water supply for non-restricted recreational impoundments be disinfected tertiary recycled water that has been subjected to conventional treatment. A non-restricted recreational impoundment is defined as “...an impoundment of recycled water, in which no limitations are imposed on body-contact water recreational activities.” Title 22 is not directly applicable to surface waters; however, the Regional Water Board finds that it is appropriate to apply an equivalent level of treatment to that required by the Department of Public Health’s reclamation criteria because the receiving water is used for irrigation of agricultural land and for contact recreation purposes. The stringent disinfection criteria of Title 22 are appropriate since the undiluted effluent may be used for the irrigation of food crops and/or for body-contact water recreation. Coliform organisms are intended as an indicator of the effectiveness of the entire treatment train and the effectiveness of removing other pathogens.

- (b) RPA Results.** The beneficial uses of the Western Pacific Interceptor Drainage Canal include municipal and domestic supply, water contact recreation, and agricultural irrigation supply, and there is, at times, less than 20:1 dilution. To protect these beneficial uses, the Regional Water Board finds that the wastewater must be disinfected and adequately treated to prevent disease. The method of treatment is not prescribed by this Order; however, wastewater must be treated to a level equivalent to that recommended by DPH.

- (c) **WQBELs.** In accordance with the requirements of Title 22, this Order includes effluent limitations for total coliform organisms of 2.2 MPN/100 mL as a 7-day median; 23 MPN/100 mL, not to be exceeded more than once in a 30-day period; and 240 MPN/100 mL as an instantaneous maximum.

In addition to coliform limitations, a turbidity effluent limitation has been included as a second indicator of the effectiveness of the treatment process and to assure compliance with the required level of treatment. The tertiary treatment process, or equivalent, is capable of reliably meeting a turbidity limitation of 2 nephelometric turbidity units (NTU) as a daily average. Failure of the filtration system such that virus removal is impaired would normally result in increased particles in the effluent, which result in higher effluent turbidity. Turbidity has a major advantage for monitoring filter performance, allowing immediate detection of filter failure and rapid corrective action. Coliform testing, by comparison, is not conducted continuously and requires several hours, to days, to identify high coliform concentrations. Therefore, to ensure compliance with DPH recommended Title 22 disinfection criteria, weekly average effluent limitations are impracticable for turbidity. This Order includes effluent limitations for turbidity of 2 NTU as a daily average; 5 NTU, not to be exceeded more than 5% of the time within a 24-hour period; and 10 NTU as an instantaneous maximum.

This Order contains effluent limitations and a tertiary level of treatment, or equivalent, necessary to protect the beneficial uses of the receiving water. The Regional Water Board has previously considered the factors in CWC section 13241 in establishing these requirements.

- (d) **Plant Performance and Attainability.** Analysis of the effluent data shows that the MEC of 50 MPN/100ml as a 7-day median for total coliform organisms is greater than applicable WQBELs. However, when the UV disinfection system and other required treatment systems are operating within specification the WQBELs are met; therefore, a compliance schedule is not included in this Order.

v. pH

- (a) **WQO.** The Basin Plan includes a water quality objective for surface waters (except for Goose Lake) that the “...pH shall not be depressed below 6.5 nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5 in fresh waters with designated COLD or WARM beneficial uses.”

- (b) **RPA Results.** The discharge has a reasonable potential to cause or contribute to an excursion above the Basin Plan’s numeric objectives for pH.

(c) **WQBELs.** Effluent limitations for pH of 6.5 as an instantaneous minimum and 8.5 as an instantaneous maximum are included in this Order based on the Basin Plan objectives for pH.

(d) **Plant Performance and Attainability.** The Facility is capable of meeting the effluent limitations for pH.

4. WQBEL Calculations

- a. This Order includes WQBELs for tetrachloroethene and ammonia. The general methodology for calculating WQBELs based on the different criteria/objectives is described in subsections IV.C.4.b through e, below. See Attachment H for the WQBEL calculations.
- b. **Effluent Concentration Allowance.** For each water quality criterion/objective, the ECA is calculated using the following steady-state mass balance equation from section 1.4 of the SIP:

$$\begin{aligned} ECA &= C + D(C - B) && \text{where } C > B, \text{ and} \\ ECA &= C && \text{where } C \leq B \end{aligned}$$

where:

- ECA = effluent concentration allowance
- D = dilution credit
- C = the priority pollutant criterion/objective
- B = the ambient background concentration.

According to the SIP, the ambient background concentration (B) in the equation above shall be the observed maximum with the exception that an ECA calculated from a priority pollutant criterion/objective that is intended to protect human health from carcinogenic effects shall use the arithmetic mean concentration of the ambient background samples. For ECAs based on MCLs, which implement the Basin Plan's chemical constituents objective and are applied as annual averages, an arithmetic mean is also used for B due to the long-term basis of the criteria.

- c. **Basin Plan Objectives and MCLs.** For WQBELs based on site-specific numeric Basin Plan objectives or MCLs, the effluent limitations are applied directly as the ECA as either an MDEL, AMEL, or average annual effluent limitations, depending on the averaging period of the objective.
- d. **Aquatic Toxicity Criteria.** WQBELs based on acute and chronic aquatic toxicity criteria are calculated in accordance with section 1.4 of the SIP. The ECAs are converted to equivalent long-term averages (i.e. LTAacute and LTAchronic) using statistical multipliers and the lowest LTA is used to calculate the AMEL and MDEL using additional statistical multipliers.

- e. **Human Health Criteria.** WQBELs based on human health criteria, are also calculated in accordance with section 1.4 of the SIP. The ECAs are set equal to the AMEL and a statistical multiplier was used to calculate the MDEL.

$$AMEL = mult_{AMEL} \left[\min \left(M_A ECA_{acute}, M_C ECA_{chronic} \right) \right] LTA_{acute}$$

$$MDEL = mult_{MDEL} \left[\min \left(M_A ECA_{acute}, M_C ECA_{chronic} \right) \right] LTA_{chronic}$$

$$MDEL_{HH} = \left(\frac{mult_{MDEL}}{mult_{AMEL}} \right) AMEL_{HH}$$

where:

$mult_{AMEL}$ = statistical multiplier converting minimum LTA to AMEL

$mult_{MDEL}$ = statistical multiplier converting minimum LTA to MDEL

M_A = statistical multiplier converting acute ECA to LTA_{acute}

M_C = statistical multiplier converting chronic ECA to $LTA_{chronic}$

Table F-6. WQBEL Calculations for Ammonia

	Acute	Chronic
Criteria (mg/L)	2.14	1.13
Background Concentration (µg/L)	--	--
Dilution Credit	No Dilution	No Dilution
ECA (µg/L)	2.14	1.13
ECA Multiplier	0.321	0.780
LTA (µg/L)	0.69	0.88
AMEL Multiplier (95 th %)	1.55	(1)
AMEL (µg/L)	1.1	(1)
MDEL Multiplier (99 th %)	3.11	(1)
MDEL (µg/L)	2.1	(1)

(1) Limitations based on acute LTA (Chronic LTA > Acute LTA).

Table F-7. WQBEL Calculations for Tetrachloroethene

	Human Health
Criteria (µg/L)	0.8
Background Concentration (µg/L)	--
Dilution Credit	No Dilution
ECA (µg/L)	0.8
AMEL (µg/L)	0.8
MDEL Multiplier (99 th %)	2.01
MDEL (µg/L)	1.6

Summary of Water Quality-Based Effluent Limitations Discharge Point No. 001

Table F-8. Summary of Water Quality-Based Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	SU	--	--	--	6.5	8.5
Ammonia	mg/L	1.1	--	2.1	--	--
	lbs/day ¹ (3.0 mgd)	28	--	53	--	--
	lbs/day ² (5.1 mgd)	47	--	89	--	--
Tetrachloroethene	µg/L	0.8	--	1.6	--	--
	lbs/day ¹ (3.0 mgd)	0.020	--	0.040	--	--
	lbs/day ² (5.1 mgd)	0.034	--	0.068	--	--
Nitrate	mg/L	10	--	--	--	--
	lbs/day ¹ (3.0 mgd)	250	--	--	--	--
	lbs/day ² (5.1 mgd)	430	--	--	--	--
Nitrite	mg/L	1.0	--	--	--	--
	lbs/day ¹ (3.0 mgd)	25	--	--	--	--
	lbs/day ² (5.1 mgd)	43	--	--	--	--
Total Coliform Organisms	MPN	--	2.2 ³	23 ⁴	--	240
Electrical Conductivity	µmhos/cm	700 ⁵	--	--	--	--
Acute Toxicity ⁶	--	--	--	--	--	--
Chronic Toxicity ⁷	--	--	--	--	--	--

¹ Based upon an average dry weather treatment design flow of 3.0 mgd.

² Based upon an average dry weather treatment design flow of 5.1 mgd.

³ 7-day median.

⁴ Not to be exceeded more than once in any 30-day period.

⁵ Annual average.

⁶ Survival of aquatic organisms is 96-hour bioassays of undiluted waste shall be no less than:

Minimum for any one bioassay ----- 70%

Median for any three or more consecutive bioassays ----- 90%

⁷ There shall be no chronic toxicity in the effluent discharge.

5. Whole Effluent Toxicity (WET)

For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct whole effluent toxicity testing for acute and chronic

toxicity, as specified in the Monitoring and Reporting Program (Attachment E section V.). This Order also contains effluent limitations for acute toxicity and requires the Discharger to implement best management practices to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity.

- a. Acute Aquatic Toxicity.** The Basin Plan contains a narrative toxicity objective that states, "All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life." (Basin Plan at page III-8.00) The Basin Plan also states that, "...effluent limits based upon acute biotoxicity tests of effluents will be prescribed where appropriate...". USEPA Region 9 provided guidance for the development of acute toxicity effluent limitations in the absence of numeric water quality objectives for toxicity in its document titled "Guidance for NPDES Permit Issuance", dated February 1994. In section B.2. "Toxicity Requirements" (pgs. 14-15) it states that, "In the absence of specific numeric water quality objectives for acute and chronic toxicity, the narrative criterion 'no toxics in toxic amounts' applies. Achievement of the narrative criterion, as applied herein, means that ambient waters shall not demonstrate for acute toxicity: 1) less than 90% survival, 50% of the time, based on the monthly median, or 2) less than 70% survival, 10% of the time, based on any monthly median. For chronic toxicity, ambient waters shall not demonstrate a test result of greater than 1 TUc." Accordingly, effluent limitations for acute toxicity have been included in this Order as follows:

Acute Toxicity. Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

Minimum for any one bioassay--	70%
Median for any three or more consecutive bioassays	90%

- b. Chronic Aquatic Toxicity.** The Basin Plan contains a narrative toxicity objective that states, "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.*" (Basin Plan at page III-8.00) Table F-9, below, shows chronic WET testing performed by the Discharger from September 2006 through September 2008.

Table F-9. Whole Effluent Chronic Toxicity Testing Results

Date	Fathead Minnow		Water Flea		Green Algae
	<i>Pimephales promelas</i> Survival (TUc)	Growth (TUc)	<i>Ceriodaphnia dubia</i> Survival (TUc)	Reproductive (TUc)	<i>Selenastrum capricornutum</i> Growth (TUc)
September 2006	1.0	>1	1.0	1.0	1.0
November 2006	1.0	1.0	1.0	1.0	1.0
January 2007	1.0	1.0	1.0	1.0	1.0
April 2007	>1	>1	1.0	1.0	1.0
July 2007	>1	>1	1.0	>1	1.0
September 2007	>1	>1	1.0	>1	1.0
November 2007	>1	>1	1.0	>1	1.0
February 2008	1.0	>1	1.0	1.0	1.0
June 2008	1.0	>1	1.0	1.0	1.0
September 2008	1.0	1.0	1.0	1.0	1.0

No dilution has been granted for chronic aquatic life criteria. Therefore, chronic toxicity testing results exceeding 1 chronic toxicity unit (TUc) demonstrates the discharge has a reasonable potential to cause or contribute to an exceedance of the Basin Plan's narrative toxicity objective. The chronic WET analytical results between September 2006 and September 2008 exceed 1 TUc for Fathead Minnow seven out of ten sampling events. Water Flea exceeded 1 TUc on three of the ten events and Green Algae did not exceed 1 TUc. Therefore, in accordance with State Water Board Order WQO 2003-0012 for the Los Coyotes and Long Beach Wastewater Reclamation Plants and WQ 2008-0008 for the City of Davis Wastewater Treatment Plant, this Order includes a narrative effluent limitation for chronic whole effluent toxicity.

To ensure compliance with the Basin Plan's narrative toxicity objective, the Discharger is required to conduct chronic WET testing, as specified in the Monitoring and Reporting Program (Attachment E section V.). Furthermore, the Special Provision contained at VI.C.2.a. of this Order requires the Discharger to investigate the causes of, and identify and implement corrective actions to reduce or eliminate effluent toxicity. If the discharge demonstrates a pattern of toxicity exceeding the numeric toxicity monitoring trigger, the Discharger is required to initiate a Toxicity Reduction Evaluation (TRE) in accordance with an approved TRE workplan. The numeric toxicity monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Discharger is required to perform accelerated chronic toxicity monitoring, as well as, the threshold to initiate a TRE if a pattern of effluent toxicity has been demonstrated.

D. Final Effluent Limitations

1. Mass-based Effluent Limitations

40 CFR 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 CFR 122.45(f)(2) allows pollutants that are limited in terms

of mass to additionally be limited in terms of other units of measurement. This Order includes effluent limitations expressed in terms of mass and concentration. In addition, pursuant to the exceptions to mass limitations provided in 40 CFR 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH, and when the applicable standards are expressed in terms of concentration (e.g., CTR criteria and MCLs) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

Mass-based effluent limitations were calculated based upon the design flow (Average Dry Weather Flow) permitted in section IV.A.1.a. and IV.A.2.a. of this Order.

2. Averaging Periods for Effluent Limitations

40 CFR 122.45 (d) requires average weekly and average monthly discharge limitations for publicly owned treatment works (POTWs) unless impracticable. However, for toxic pollutants and pollutant parameters in water quality permitting, USEPA recommends the use of a maximum daily effluent limitation in lieu of average weekly effluent limitations for two reasons. *“First, the basis for the 7-day average for POTWs derives from the secondary treatment requirements. This basis is not related to the need for assuring achievement of water quality standards. Second, a 7-day average, which could comprise up to seven or more daily samples, could average out peak toxic concentrations and therefore the discharge’s potential for causing acute toxic effects would be missed.”* (TSD, pg. 96) This Order utilizes maximum daily effluent limitations in lieu of average weekly effluent limitations for ammonia and tetrachloroethene as recommended by the TSD for the achievement of water quality standards and for the protection of the beneficial uses of the receiving stream. Furthermore, for BOD, TSS, pH and coliform, weekly average effluent limitations have been replaced or supplemented with effluent limitations utilizing shorter averaging periods. The rationale for using shorter averaging periods for these constituents is discussed in section IV.C.3. of this Fact Sheet.

3. Satisfaction of Anti-Backsliding Requirements

The effluent limitations in this Order are at least as stringent as the effluent limitations in the existing Order, with the exception of effluent limitations for chlorine residual, dibromochloromethane, dichlorobromomethane, bis(2-ethylhexyl)phthalate, copper, aluminum, iron, manganese, sulfate, organochloride pesticides, tributyltin, methylene blue active substances, and total trihalomethanes. As discussed in section IV.C.3.b, above, data collected after completion of the facility upgrades demonstrate there is no longer reasonable potential for the discharge to cause, have the reasonable potential to cause, or contribute to an exceedance of the applicable water quality objectives for these constituents. Therefore, effluent limitations for these constituents are not required in this Order. This relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations and is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16. Any impact on existing water quality will be insignificant.

The Clean Water Act specifies that a revised permit may not include effluent limitations that are less stringent than the previous permit unless a less stringent limitation is justified based on exceptions to the anti-backsliding provisions contained in Clean Water Act sections 402(o) or 303(d)(4), or, where applicable, 40 CFR 122.44(l).

Order No. R5-2004-0094 contained effluent limitations for turbidity. The prior limitations were solely an operational check to ensure the treatment system was functioning properly and could meet the limits for solids and coliform. The prior effluent limitations were not intended to regulate turbidity in the receiving water. Rather, turbidity is an operational parameter to determine proper system functioning and not a WQBEL.

This Order contains performance-based operational turbidity specifications to be met prior to disinfection in lieu of effluent limitations. The revised Order does not include effluent limitations for turbidity. However, the performance-based specification in this Order is an equivalent limit that is not less stringent, and therefore does not constitute backsliding.

The revised operational specifications for turbidity are the same as the effluent limitations in Order No. R5-2004-0094, with the inclusion of a more stringent requirement for an instantaneous maximum limitation at any time. (See Special Provisions IV.C.4.a, Ultraviolet Disinfection (UV) System Operating Specifications for turbidity specifications.) The revised Order moves the point of compliance from the final effluent after disinfection to an internal compliance point prior to disinfection. These revisions are consistent with state regulations implementing recycled water requirements.

The revision in the turbidity limitation is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16 because this Order imposes equivalent or more stringent requirements than Order No. R5-2004-0094 and therefore does not allow degradation.

4. Satisfaction of Antidegradation Policy

This Order does not allow for an increase in flow or mass of pollutants to the receiving water. Therefore, a complete antidegradation analysis is not necessary. The Order requires compliance with applicable federal technology-based standards and with WQBELs where the discharge could have the reasonable potential to cause or contribute to an exceedance of water quality standards. The permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge. The impact on existing water quality will be insignificant.

5. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on flow, BOD, TSS and pH. The WQBELs consist of restrictions on ammonia, tetrachlorethene, nitrate, nitrite, pathogens, and electrical conductivity. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the CTR-SIP, which was approved by USEPA on 18 May 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to 30 May 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to 30 May 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

Summary of Final Effluent Limitations Discharge Point No. 001

Table F-10. Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow	mgd ¹	3.0 ²	--	--	--	--
	mgd ³	5.1 ⁴	--	--	--	--
BOD ₅ @ 20°C ⁵	mg/L	10	15	20	--	--
	lbs/day ¹ (3.0 mgd)	250	380	500	--	--
	lbs/day ³ (5.1 mgd)	430	640	850	--	--
Total Suspended Solids ⁵	mg/L	10	15	20	--	--
	lbs/day ¹ (3.0 mgd)	250	380	500	--	--
	lbs/day ³ (5.1 mgd)	430	640	850	--	--
pH	SU	--	--	--	6.5	8.5

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Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Ammonia	mg/L	1.1	--	2.1	--	--
	lbs/day ¹ (3.0 mgd)	28	--	53	--	--
	lbs/day ³ (5.1 mgd)	47	--	89	--	--
Tetrachloroethene	µg/L	0.8	--	1.6	--	--
	lbs/day ¹ (3.0 mgd)	0.02	--	0.04	--	--
	lbs/day ³ (5.1 mgd)	0.03	--	0.07	--	--
Nitrate	mg/L	10	--	--	--	--
	lbs/day ¹ (3.0 mgd)	250	--	--	--	--
	lbs/day ³ (5.1 mgd)	430	--	--	--	--
Nitrite	mg/L	1.0	--	--	--	--
	lbs/day ¹ (3.0 mgd)	25	--	--	--	--
	lbs/day ³ (5.1 mgd)	43	--	--	--	--
Total Coliform Organisms	MPN	--	2.2 ⁶	23 ⁷	--	240
Electrical Conductivity	µmhos/cm	700 ⁸	--	--	--	--
Acute Toxicity ⁹	--	--	--	--	--	--
Chronic Toxicity ¹⁰	--	--	--	--	--	--

¹ Based upon an average dry weather treatment design flow of 3.0 mgd.

² Average dry weather flow of 3.0 mgd.

³ Based upon an average dry weather treatment design flow of 5.1 mgd.

⁴ Average dry weather flow of 5.1 mgd.

⁵ The average monthly percent removal of BOD 5-day 20°C and total suspended solids shall not be less than 85 percent.

⁶ 7-day median.

⁷ Not to be exceeded more than once in any 30-day period.

⁸ Annual average.

⁹ Survival of aquatic organisms is 96-hour bioassays of undiluted waste shall be no less than:

Minimum for any one bioassay ----- 70%

Median for any three or more consecutive bioassays ----- 90%

¹⁰ There shall be no chronic toxicity in the effluent discharge.

E. Interim Effluent Limitations

1. **Mercury.** See section IV.C.3.b.x of the Fact Sheet.

2. **Ammonia.** State Water Board's Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits (State Water Board Resolution 2008-0025) requires that if a compliance schedule is granted in an NPDES permit,

the Regional Water Board shall establish interim requirements and dates for their achievement in the NPDES permit. If the compliance schedule exceeds one year, the Regional Water Board shall establish numeric limitations for the pollutant in the permit, and may also impose pollutant minimization and source control measures. The numeric interim limitations must, at minimum, be based on current treatment plant performance or existing permit limitations, whichever is more stringent.

The Facility is capable of maintaining compliance with the final average monthly effluent limitations for ammonia. However, compliance with the final maximum daily effluent limitations (MDEL) is not achievable. The MDEL in the previous Order is more stringent than a performance-based effluent limit. Therefore, the interim limitations for ammonia in this Order are included in lieu of the final MDEL and are based on the previous Order's final one-hour average effluent limitation, which is a floating limit based on effluent pH. The Regional Water Board finds that the Discharger has demonstrated consistent compliance with the previous Order's floating ammonia water quality-based effluent limits.

F. Land Discharge Specifications – NOT APPLICABLE

G. Reclamation Specifications – NOT APPLICABLE

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Basin Plan water quality objectives to protect the beneficial uses of surface water and groundwater include numeric objectives and narrative objectives, including objectives for chemical constituents, toxicity, and tastes and odors. The toxicity objective requires that surface water and groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, animals, or aquatic life. The chemical constituent objective requires that surface water and groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use or that exceed the maximum contaminant levels (MCLs) in Title 22, CCR. The tastes and odors objective states that surface water and groundwater shall not contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses. The Basin Plan requires the application of the most stringent objective necessary to ensure that surface water and groundwater do not contain chemical constituents, toxic substances, radionuclides, or taste and odor producing substances in concentrations that adversely affect domestic drinking water supply, agricultural supply, or any other beneficial use.

A. Surface Water

1. CWA section 303(a-c), requires states to adopt water quality standards, including criteria where they are necessary to protect beneficial uses. The Regional Water Board adopted water quality criteria as water quality objectives in the Basin Plan. The Basin Plan states that “[t]he numerical and narrative water quality objectives define the least stringent standards that the Regional Water Board will apply to regional waters in order to protect the beneficial uses.” The Basin Plan includes numeric and narrative water quality objectives for various beneficial uses and water

bodies. This Order contains receiving surface water limitations based on the Basin Plan numerical and narrative water quality objectives for bacteria, biostimulatory substances, color, chemical constituents, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, salinity, suspended sediment, settleable substances, suspended material, tastes and odors, temperature, toxicity, and turbidity.

B. Groundwater

1. The beneficial uses of the underlying ground water are municipal and domestic supply, industrial service supply, industrial process supply, and agricultural supply.
2. Basin Plan water quality objectives include narrative objectives for chemical constituents, tastes and odors, and toxicity of groundwater. The toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, animals, or aquatic life. The chemical constituent objective states groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use. The tastes and odors objective prohibits taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses. The Basin Plan also establishes numerical water quality objectives for chemical constituents and radioactivity in groundwaters designated as municipal supply. These include, at a minimum, compliance with MCLs in Title 22 of the CCR. The bacteria objective prohibits coliform organisms at or above 2.2 MPN/100 mL. The Basin Plan requires the application of the most stringent objective necessary to ensure that waters do not contain chemical constituents, toxic substances, radionuclides, taste- or odor-producing substances, or bacteria in concentrations that adversely affect municipal or domestic supply, agricultural supply, industrial supply or some other beneficial use.
3. Groundwater limitations are required to protect the beneficial uses of the underlying groundwater.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (Attachment E) of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the Monitoring and Reporting Program for the Facility.

A. Influent Monitoring

1. Influent monitoring is required to collect data on the characteristics of the wastewater and to assess compliance with effluent limitations (e.g., BOD₅ and TSS reduction

requirements). The Monitoring and Reporting Requirements (Attachment E) include influent monitoring requirements in Attachment E, section III.A.

B. Effluent Monitoring

1. Pursuant to the requirements of 40 CFR 122.44(i)(2) effluent monitoring is required for all constituents with effluent limitations. Effluent monitoring is necessary to assess compliance with effluent limitations, assess the effectiveness of the treatment process, and to assess the impacts of the discharge on the receiving stream and groundwater.
2. Effluent monitoring frequencies and sample types for flow, pH, temperature, ammonia, BOD, total suspended solids, total coliform organisms, nitrate, nitrite, and tetrachloroethene have been retained from Order No. R5-2004-0094 to determine compliance with effluent limitations for these parameters.
3. Monitoring data collected over the existing permit term for dibromochloromethane, dichlorobromomethane, bis(2-ethylhexyl)phthalate, copper, aluminum, iron, manganese, sulfate, organochloride pesticides, tributyltin, methylene blue active substances, and total trihalomethanes did not demonstrate reasonable potential to exceed water quality objectives/criteria. Thus, specific monitoring requirements for these parameters have not been retained from Order No. R5-2004-0094.
4. Effluent monitoring frequencies and/or sample type have been adjusted from to Order No. R5-2004-0094 for total residual chlorine, settleable solids, hardness, total dissolved solids, and electrical conductivity for consistency with other NPDES permits for similar sized discharges and in the case of hardness and total dissolved solids to provide a more representative data set.

C. Whole Effluent Toxicity Testing Requirements

1. **Acute Toxicity.** Quarterly 96-hour bioassay testing is required to demonstrate compliance with the effluent limitation for acute toxicity.
2. **Chronic Toxicity.** Quarterly chronic whole effluent toxicity testing is required in order to demonstrate compliance with the Basin Plan's narrative toxicity objective.

D. Receiving Water Monitoring

1. Surface Water

- a. Receiving water monitoring is necessary to assess compliance with receiving water limitations and to assess the impacts of the discharge on the receiving stream.

2. Groundwater

- a. CWC section 13267 states, in part, "(a) A Regional Water Board, in establishing...waste discharge requirements... may investigate the quality of any

waters of the state within its region” and “(b) (1) In conducting an investigation..., the Regional Water Board may require that any person who... discharges... waste...that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the Regional Water Board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports.” The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the Regional Water Board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports. The Monitoring and Reporting Program is issued pursuant to CWC section 13267. The groundwater monitoring and reporting program required by this Order and the Monitoring and Reporting Program are necessary to assure compliance with these waste discharge requirements. The Discharger is responsible for the discharges of waste at the facility subject to this Order.

- b.** Monitoring of the groundwater must be conducted to determine if the discharge has caused an increase in constituent concentrations, when compared to background. The monitoring must, at a minimum, require a complete assessment of groundwater impacts including the vertical and lateral extent of degradation, an assessment of all wastewater-related constituents which may have migrated to groundwater, an analysis of whether additional or different methods of treatment or control of the discharge are necessary to provide best practicable treatment or control to comply with Resolution No. 68-16. Economic analysis is only one of many factors considered in determining best practicable treatment or control. If monitoring indicates that the discharge has incrementally increased constituent concentrations in groundwater above background, this permit may be reopened and modified. Until groundwater monitoring is sufficient, this Order contains Groundwater Limitations that allow groundwater quality to be degraded for certain constituents when compared to background groundwater quality, but not to exceed water quality objectives. If groundwater quality has been degraded by the discharge, the incremental change in pollutant concentration (when compared with background) may not be increased. If groundwater quality has been or may be degraded by the discharge, this Order may be reopened and specific numeric limitations established consistent with Resolution No. 68-16 and the Basin Plan.

E. Other Monitoring Requirements

1. Biosolids Monitoring

Biosolids monitoring is required to ensure compliance with the biosolids disposal requirements contained in the Special Provision contained in section VI.C.6.a. of this Order. Biosolids disposal requirements are imposed pursuant to 40 CFR Part 503 to protect public health and prevent groundwater degradation.

2. Water Supply Monitoring

Water supply monitoring is required to evaluate the source of TDS, EC and standard minerals in the water supply.

3. Ultraviolet Disinfection System Monitoring

UV System specifications and monitoring and reporting is required to ensure that adequate UV dosage is applied to the wastewater to inactivate pathogens (e.g. viruses) in the wastewater. UV disinfection system monitoring requirements are imposed pursuant to requirements established by the California Department of Public Health (DPH) and the National Water Research Institute (NWRI) and American Water Works Association Research Foundation NWRI/AWWARF's *"Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse"*.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42.

40 CFR 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. 40 CFR 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR 122.41(j)(5) and (k)(2) because the enforcement authority under the CWC is more stringent. In lieu of these conditions, this Order incorporates by reference CWC section 13387(e).

B. Special Provisions

1. Reopener Provisions

a. Mercury. This provision allows the Regional Water Board to reopen this Order in the event mercury is found to be causing toxicity based on acute or chronic toxicity test results, or if a TMDL program is adopted. In addition, this Order may be reopened if the Regional Water Board determines that a mercury offset program is feasible for dischargers subject to NPDES permits.

b. Whole Effluent Toxicity. This Order requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity through a Toxicity Reduction Evaluation (TRE). This Order may be reopened to include a numeric chronic toxicity limitation, a new acute toxicity limitation, and/or

a limitation for a specific toxicant identified in the TRE. Additionally, if a numeric chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened to include a numeric chronic toxicity limitation based on that objective.

2. Special Studies and Additional Monitoring Requirements

- a. Chronic Whole Effluent Toxicity Requirements.** The Basin Plan contains a narrative toxicity objective that states, “*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.*” (Basin Plan at page III-8.00) Based on whole effluent chronic toxicity testing performed by the Discharger from 11 September 2006 through 11 September 2008, the discharge has reasonable potential to cause or contribute to an in-stream excursion above of the Basin Plan’s narrative toxicity objective.

This provision requires the Discharger to develop a TRE Workplan in accordance with USEPA guidance. In addition, the provision provides a numeric toxicity monitoring trigger and requirements for accelerated monitoring, as well as, requirements for TRE initiation if a pattern of toxicity has been demonstrated.

Monitoring Trigger. A numeric toxicity monitoring trigger of > 1 TUc (where TUc = 100/NOEC) is applied in the provision, because this Order does not allow any dilution for the chronic condition. Therefore, a TRE is triggered when the effluent exhibits a pattern of toxicity at 100% effluent.

Accelerated Monitoring. The provision requires accelerated WET testing when a regular WET test result exceeds the monitoring trigger. The purpose of accelerated monitoring is to determine, in an expedient manner, whether there is a pattern of toxicity before requiring the implementation of a TRE. Due to possible seasonality of the toxicity, the accelerated monitoring should be performed in a timely manner, preferably taking no more than 2 to 3 months to complete.

The provision requires accelerated monitoring consisting of four chronic toxicity tests in a six-week period (i.e., one test every two weeks) using the species that exhibited toxicity. Guidance regarding accelerated monitoring and TRE initiation is provided in the *Technical Support Document for Water Quality-based Toxics Control*, EPA/505/2-90-001, March 1991 (TSD). The TSD at page 118 states, “*EPA recommends if toxicity is repeatedly or periodically present at levels above effluent limits more than 20 percent of the time, a TRE should be required.*” Therefore, four accelerated monitoring tests are required in this provision. If no toxicity is demonstrated in the four accelerated tests, then it demonstrates that toxicity is not present at levels above the monitoring trigger more than 20 percent of the time (only 1 of 5 tests are toxic, including the initial test). However, notwithstanding the accelerated monitoring results, if there is adequate evidence of a pattern of effluent toxicity (i.e. toxicity present exceeding the monitoring

trigger more than 20 percent of the time), the Executive Officer may require that the Discharger initiate a TRE.

See the WET Accelerated Monitoring Flow Chart (Figure F-1), below, for further clarification of the accelerated monitoring requirements and for the decision points for determining the need for TRE initiation.

TRE Guidance. The Discharger is required to prepare a TRE Workplan in accordance with USEPA guidance. Numerous guidance documents are available, as identified below:

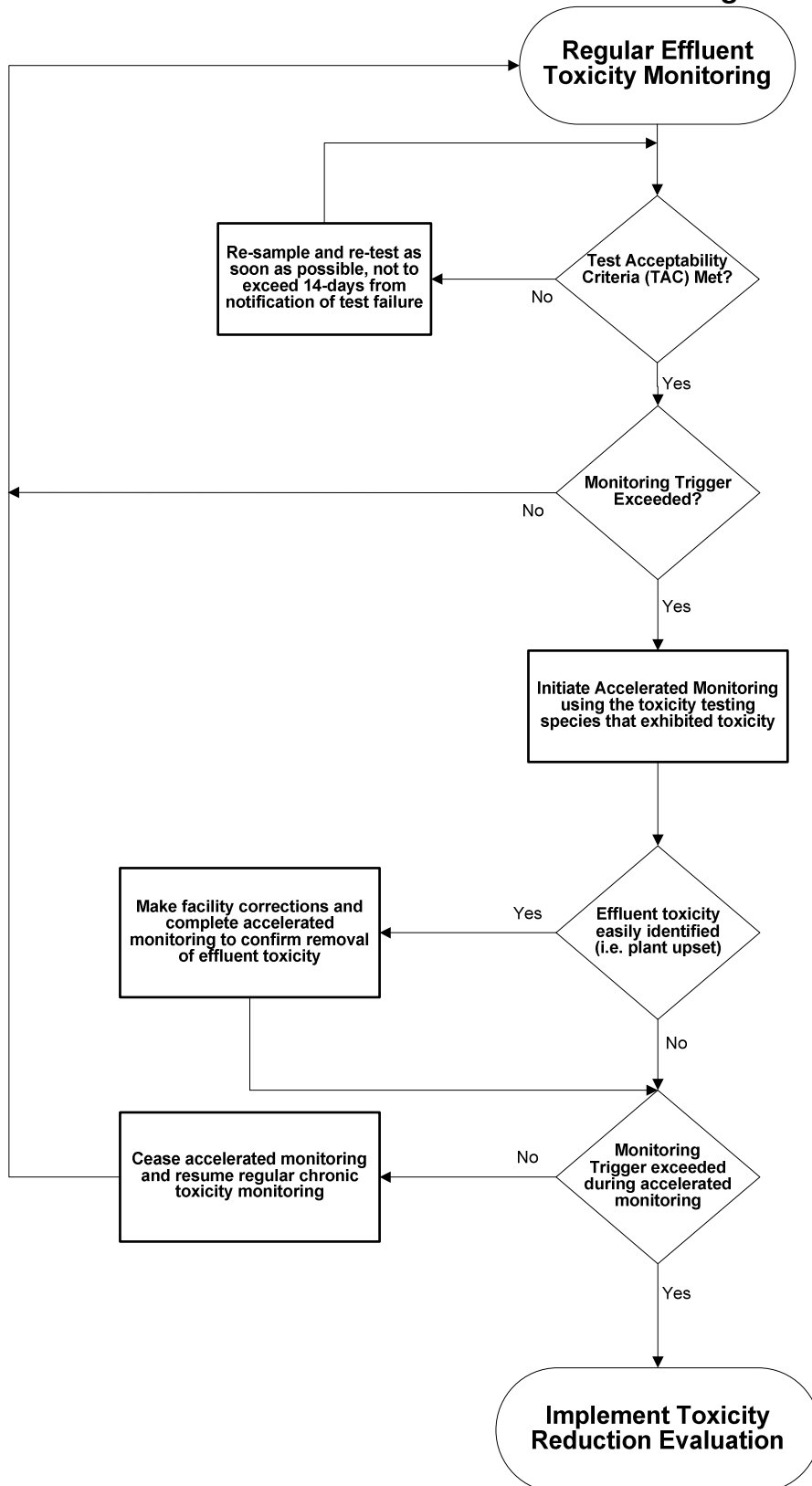
- Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants, EPA/833-B-99/002, August 1999.
- Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (TREs), EPA/600/2-88/070, April 1989.
- Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures, Second Edition, EPA 600/6-91/003, February 1991.
- Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I, EPA/600/6-91/005F, May 1992.
- Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity, Second Edition, EPA/600/R-92/080, September 1993.
- Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity, Second Edition, EPA 600/R-92/081, September 1993.
- Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, EPA-821-R-02-012, October 2002.
- Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA-821-R-02-013, October 2002.
- Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001, March 1991.

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**Figure F-1
WET Accelerated Monitoring Flow Chart**



- b. Electrical Conductivity Minimization Report.** The discharge does not pose a reasonable potential for excursion of salinity goals, this Order does not require a site-specific EC study; however, this Order requires a one-time report documenting efforts taken to reduce salinity in the facility influent and maintain low EC levels in the discharge.

3. Best Management Practices and Pollution Prevention

- a. Salinity Evaluation and Minimization Plan.** An Evaluation and Minimization Plan for salinity is required in this Order to ensure adequate measures are developed and implemented by the Discharger to reduce the discharge of salinity to the Western Pacific Interceptor Drainage Canal, a tributary to the Bear River.
- b. Mercury Evaluation and Minimization Plan.** An Evaluation and Minimization Plan for mercury is required in this Order to ensure adequate measures are developed and implemented by the Discharger to reduce the discharge of mercury to the Western Pacific Interceptor Drainage Canal, a tributary to the Bear River.

4. Construction, Operation, and Maintenance Specifications

- a. Ultraviolet Disinfection (UV) System Operating Specifications.** UV disinfection system specifications and monitoring and reporting requirements are required to ensure that adequate UV dosage is applied to the wastewater to inactivate pathogens (e.g. viruses) in the wastewater. UV dosage is dependent on several factors such as UV transmittance, UV power setting, wastewater turbidity, and wastewater flow through the UV disinfection system. Monitoring and reporting of these parameters is necessary to determine compliance with minimum dosage requirements established by the California Department of Public Health, (DPH) and the National Water Research Institute (NWRI) and American Water Works Association Research Foundation NWRI/AWWARF's "*Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse*" first published in December 2000 revised as a Second Edition dated May 2003. In addition, a memorandum dated 1 November 2004 issued by DPH to Regional Water Board executive officers recommended that provisions be included in permits to water recycling treatment plants employing UV disinfection requiring dischargers to establish fixed cleaning frequency of quartz sleeves as well as include provisions that specify minimum delivered UV dose that must be maintained (as recommended by the NWRI/AWWARF UV Disinfection Guidelines).

Turbidity is included as an operational specification as an indicator of the effectiveness of the treatment process and to assure compliance with effluent limitations for total coliform organisms. The tertiary treatment process utilized at this Facility is capable of reliably meeting a turbidity limitation of 2 nephelometric turbidity units (NTU) as a daily average. Failure of the treatment system such that virus removal is impaired would normally result in increased particles in the effluent, which result in higher effluent turbidity and could impact UV dosage.

Turbidity has a major advantage for monitoring filter performance, allowing immediate detection of filter failure and rapid corrective action. The operational specification requires that turbidity prior to disinfection shall not exceed 2 NTU as a daily average; 5 NTU, more than 5 percent of the time within a 24-hour period, and an instantaneous maximum of 10 NTU.

Minimum UV dosage and turbidity specifications are included as operating criteria in section VI.C.4.a of this Order and section IX.C.1 of the Monitoring and Reporting Program (Attachment E) to ensure that adequate disinfection of wastewater is achieved.

- b. The operation and maintenance specifications for the Wastewater Treatment Facility are necessary to protect the beneficial uses of the groundwater. The specifications included in this Order are retained from R5-2004-0094. In addition, reporting requirements related to use of the Wastewater Treatment Facility are required to monitor their use and the potential impact on groundwater.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. Pretreatment Requirements.

- i. Under the current plant ADWF of 3.0 mgd a pretreatment program is not required. Prior to the Regional Water Board approval of an 5.1 mgd ADWF discharge, the Discharger must adopt an approved industrial pretreatment program.
 - ii. The federal CWA section 307(b), and federal regulations, 40 CFR Part 403, require publicly owned treatment works to develop an acceptable industrial pretreatment program. A pretreatment program is required to prevent the introduction of pollutants, which will interfere with treatment plant operations or sludge disposal, and prevent pass through of pollutants that exceed water quality objectives, standards or permit limitations. Pretreatment requirements are imposed pursuant to 40 CFR Part 403.
 - iii. The Discharger shall implement and enforce its approved pretreatment program and is an enforceable condition of this Order. If the Discharger fails to perform the pretreatment functions, the Regional Water Board, the State Water Board or USEPA may take enforcement actions against the Discharger as authorized by the CWA.
- b. The State Water Board issued General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ (General Order) on 2 May 2006. The General Order requires public agencies that own or operate sanitary sewer systems with greater than one mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans (SSMPs) and

report all sanitary sewer overflows (SSOs), among other requirements and prohibitions.

Furthermore, the General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. Inasmuch that the Discharger's collection system is part of the system that is subject to this Order, certain standard provisions are applicable as specified in Provisions, section VI.C.5. For instance, the 24-hour reporting requirements in this Order are not included in the General Order. The Discharger must comply with both the General Order and this Order. The Discharger and public agencies that are discharging wastewater into the facility were required to obtain enrollment for regulation under the General Order by 1 December 2006.

6. Other Special Provisions

- a. **Ownership Change.** To maintain the accountability of the operation of the Facility, the Discharger is required to notify the succeeding owner or operator of the existence of this Order by letter if, and when, there is any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger.

7. Compliance Schedules

The use and location of compliances schedules in the permit depends on the Discharger's ability to comply and the source of the applied water quality criteria

- a. At the time the tentative NPDES permit was issued, the Discharger had not submitted a request, and justification for a compliance schedule for ammonia. Therefore, this Order requires the Discharger to submit an infeasibility analysis in accordance with the application requirements specified in State Water Board's Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits (State Water Board Resolution 2008-0025). This Order establishes a compliance schedule for the new, final, water quality-based effluent limitations for ammonia and requires full compliance within 5-years of the adoption date. However, this compliance schedule is contingent on the submittal of acceptable infeasibility analysis by the effective date of this Order.

VIII. PUBLIC PARTICIPATION

The Regional Water Board is considering the issuance of WDRs that will serve as an NPDES permit for the Facility. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the following direct mailing to agencies and known interested parties, posting of NOPH at the Facility, the Discharger's offices and the local post office and publication in the local paper.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board offices by 5:00 p.m. on **26 April 2010**.

C. Public Hearing

The Regional Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: 26/27/28 May 2010
Time: 8:30 a.m.
Location: Regional Water Quality Control Board, Central Valley Region
11020 Sun Center Dr., Suite #200
Rancho Cordova, CA 95670

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our Web address is www.waterboards.ca.gov/centralvalley where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying

The Report of Waste Discharge, related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (916) 464-3291.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this Facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Josh Palmer at (916) 464-4674 or jpalmer@waterboards.ca.gov.

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26 March 2010

OF REASONABLE POTENTIAL ANALYSIS

Units	MEC	B	C	CMC	CCC	Water & Org	Org. Only	Basin Plan	MCL	Reasonable Potential
µg/L	< 0.50 ⁽¹⁾	--	0.41	11,000	--	0.41	34	--	80	No
µg/L	< 0.50 ⁽¹⁾	--	0.56	11,000	--	0.56	46	--	80	No
µg/L	1.8	--	0.80	5,280	840	0.8	8.85	--	5	Yes
µg/L	0.83	--	1.8	--	--	1.8	5.9	--	4	No
µg/L	7.8	--	9.4	--	--	1,300	--	--	1,000	No
µg/L	< 50 ⁽¹⁾	--	200	750	87	--	--	--	200	No
µg/L	65	--	300	--	1,000 ⁽¹⁾	--	--	--	300	No
µg/L	22	--	50	--	--	--	100	--	50	No
mg/L	78	--	250	--	--	--	--	--	250	No
µg/L	All ND ⁽¹⁾	--	ND	--	--	--	--	--	--	No
µg/L	< 0.002 ⁽¹⁾	--	0.063	0.072	0.46	--	--	--	--	No
µg/L	< 0.1 ⁽¹⁾	--	500	--	--	--	--	--	500	No
µg/L	All ND ⁽¹⁾	--	80	--	--	--	--	--	--	No
mg/L	6.7	--	0.51	2.14	0.51	30	--	--	--	Yes
µg/L	0.0009	--	0.05	0.94	1.8	0.05	0.051	--	--	No
mg/L	NA	--	0.01	--	--	--	--	--	--	No
mg/L	9.1	--	10	--	--	--	--	--	10	Yes ⁽²⁾
mg/L	0.37	--	1.0	--	--	--	--	--	1.0	Yes ⁽²⁾
µmhos/cm	653 ⁽³⁾	--	700	--	--	--	--	--	900	No
mg/L	412 ⁽³⁾	--	450	--	--	--	--	--	500	No
TUc	3.3	--	1.0	--	--	--	--	--	--	Yes

given as a total recoverable.

Footnotes:

(1) Samples analyzed were below the detection limit.

(2) Reasonable potential based on review of other information available to determine if a water quality-based effluent limitation is required in the SIP's RPA procedures.

(3) Annual average.

on or lowest detection level, if non-detect

Analysis

CTR or NTR)

CTR or NTR)

consumption of Water & Organisms (CTR or

umption of Organisms Only (CTR or NTR)

n Water Quality Objective

Contaminant Level

ATTACHMENT H – CONSTITUENTS TO BE MONITORED

An effluent and receiving water monitoring study is required to ensure adequate information is available for the next permit renewal. During the second year of this permit term, the Discharger shall conduct quarterly monitoring of the effluent at EFF-001 and of the receiving water at RSW-001 for all priority pollutants and other constituents of concern as described in Table H-1. Dioxin and Furan sampling shall be performed only twice during the year, as described below.

During the third year of of this permit term, the Discharger shall conduct quarterly monitoring of the effluent at EFF-001 and of the receiving water at RSW-001 for all constituents that were detected once or more during the prior year of quarterly sampling. This includes all constituents that were reported as an estimated value (J-flagged). Dioxin and Furan sampling shall be performed twice during the 3rd year for any of the Dioxin and/or Furan constituents detected or estimated during the 2nd year semi-annual sampling events.

Table H-1. Constituents to Be Monitored

CTR #	Constituent	CAS Number	Controlling Water Quality Criterion for Surface Waters		Criterion Quantitation Limit ug/L or noted	Suggested Test Methods
			Basis	Criterion Concentration ug/L or noted ¹		
VOLATILE ORGANICS						
28	1,1-Dichloroethane	75343	Primary MCL	5	0.5	EPA 8260B
30	1,1-Dichloroethene	75354	National Toxics Rule	0.057	0.5	EPA 8260B
41	1,1,1-Trichloroethane	71556	Primary MCL	200	0.5	EPA 8260B
42	1,1,2-Trichloroethane	79005	National Toxics Rule	0.6	0.5	EPA 8260B
37	1,1,2,2-Tetrachloroethane	79345	National Toxics Rule	0.17	0.5	EPA 8260B
75	1,2-Dichlorobenzene	95501	Taste & Odor	10	0.5	EPA 8260B
29	1,2-Dichloroethane	107062	National Toxics Rule	0.38	0.5	EPA 8260B
	cis-1,2-Dichloroethene	156592	Primary MCL	6	0.5	EPA 8260B
31	1,2-Dichloropropane	78875	Calif. Toxics Rule	0.52	0.5	EPA 8260B
101	1,2,4-Trichlorobenzene	120821	Public Health Goal	5	0.5	EPA 8260B
76	1,3-Dichlorobenzene	541731	Taste & Odor	10	0.5	EPA 8260B
32	1,3-Dichloropropene	542756	Primary MCL	0.5	0.5	EPA 8260B
77	1,4-Dichlorobenzene	106467	Primary MCL	5	0.5	EPA 8260B
17	Acrolein	107028	Aquatic Toxicity	21	2	EPA 8260B
18	Acrylonitrile	107131	National Toxics Rule	0.059	2	EPA 8260B
19	Benzene	71432	Primary MCL	1	0.5	EPA 8260B
20	Bromoform	75252	Calif. Toxics Rule	4.3	0.5	EPA 8260B
34	Bromomethane	74839	Calif. Toxics Rule	48	1	EPA 8260B
21	Carbon tetrachloride	56235	National Toxics Rule	0.25	0.5	EPA 8260B
22	Chlorobenzene (mono chlorobenzene)	108907	Taste & Odor	50	0.5	EPA 8260B

CTR #	Constituent	CAS Number	Controlling Water Quality Criterion for Surface Waters		Criterion Quantitation Limit ug/L or noted	Suggested Test Methods
			Basis	Criterion Concentration ug/L or noted ¹		
24	Chloroethane	75003	Taste & Odor	16	0.5	EPA 8260B
25	2- Chloroethyl vinyl ether	110758	Aquatic Toxicity	122 ⁽²⁾	1	EPA 8260B
26	Chloroform	67663	OEHHA Cancer Risk	1.1	0.5	EPA 8260B
35	Chloromethane	74873	USEPA Health Advisory	3	0.5	EPA 8260B
23	Dibromochloromethane	124481	Calif. Toxics Rule	0.41	0.5	EPA 8260B
27	Dichlorobromomethane	75274	Calif. Toxics Rule	0.56	0.5	EPA 8260B
36	Dichloromethane	75092	Calif. Toxics Rule	4.7	0.5	EPA 8260B
33	Ethylbenzene	100414	Taste & Odor	29	0.5	EPA 8260B
88	Hexachlorobenzene	118741	Calif. Toxics Rule	0.00075	1	EPA 8260B
89	Hexachlorobutadiene	87683	National Toxics Rule	0.44	1	EPA 8260B
91	Hexachloroethane	67721	National Toxics Rule	1.9	1	EPA 8260B
94	Naphthalene	91203	USEPA IRIS	14	10	EPA 8260B
38	Tetrachloroethene	127184	National Toxics Rule	0.8	0.5	EPA 8260B
39	Toluene	108883	Taste & Odor	42	0.5	EPA 8260B
40	trans-1,2-Dichloroethylene	156605	Primary MCL	10	0.5	EPA 8260B
43	Trichloroethene	79016	National Toxics Rule	2.7	0.5	EPA 8260B
44	Vinyl chloride	75014	Primary MCL	0.5	0.5	EPA 8260B
	Methyl-tert-butyl ether (MTBE)	1634044	Secondary MCL	5	0.5	EPA 8260B
	Trichlorofluoromethane	75694	Primary MCL	150	5	EPA 8260B
	1,1,2-Trichloro-1,2,2-Trifluoroethane	76131	Primary MCL	1200	10	EPA 8260B
	Styrene	100425	Taste & Odor	11	0.5	EPA 8260B
	Xylenes	1330207	Taste & Odor	17	0.5	EPA 8260B
SEMI-VOLATILE ORGANICS						
60	1,2-Benzanthracene	56553	Calif. Toxics Rule	0.0044	5	EPA 8270C
85	1,2-Diphenylhydrazine	122667	National Toxics Rule	0.04	1	EPA 8270C
45	2-Chlorophenol	95578	Taste and Odor	0.1	2	EPA 8270C
46	2,4-Dichlorophenol	120832	Taste and Odor	0.3	1	EPA 8270C
47	2,4-Dimethylphenol	105679	Calif. Toxics Rule	540	2	EPA 8270C
49	2,4-Dinitrophenol	51285	National Toxics Rule	70	5	EPA 8270C
82	2,4-Dinitrotoluene	121142	National Toxics Rule	0.11	5	EPA 8270C
55	2,4,6-Trichlorophenol	88062	Taste and Odor	2	10	EPA 8270C
83	2,6-Dinitrotoluene	606202	USEPA IRIS	0.05	5	EPA 8270C
50	2-Nitrophenol	25154557	Aquatic Toxicity	150 ⁽³⁾	10	EPA 8270C
71	2-Chloronaphthalene	91587	Aquatic Toxicity	1600 ⁽⁴⁾	10	EPA 8270C
78	3,3'-Dichlorobenzidine	91941	National Toxics Rule	0.04	5	EPA 8270C
62	3,4-Benzofluoranthene	205992	Calif. Toxics Rule	0.0044	10	EPA 8270C

CTR #	Constituent	CAS Number	Controlling Water Quality Criterion for Surface Waters		Criterion Quantitation Limit ug/L or noted	Suggested Test Methods
			Basis	Criterion Concentration ug/L or noted ¹		
52	4-Chloro-3-methylphenol	59507	Aquatic Toxicity	30	5	EPA 8270C
48	4,6-Dinitro-2-methylphenol	534521	National Toxics Rule	13.4	10	EPA 8270C
51	4-Nitrophenol	100027	USEPA Health Advisory	60	5	EPA 8270C
69	4-Bromophenyl phenyl ether	101553	Aquatic Toxicity	122	10	EPA 8270C
72	4-Chlorophenyl phenyl ether	7005723	Aquatic Toxicity	122 ⁽²⁾	5	EPA 8270C
56	Acenaphthene	83329	Taste and Odor	20	1	EPA 8270C
57	Acenaphthylene	208968	No Criteria Available		10	EPA 8270C
58	Anthracene	120127	Calif. Toxics Rule	9,600	10	EPA 8270C
59	Benzidine	92875	National Toxics Rule	0.00012	5	EPA 8270C
61	Benzo(a)pyrene (3,4-Benzopyrene)	50328	Calif. Toxics Rule	0.0044	0.1	EPA 8270C
63	Benzo(g,h,i)perylene	191242	No Criteria Available		5	EPA 8270C
64	Benzo(k)fluoranthene	207089	Calif. Toxics Rule	0.0044	2	EPA 8270C
65	Bis(2-chloroethoxy) methane	111911	No Criteria Available		5	EPA 8270C
66	Bis(2-chloroethyl) ether	111444	National Toxics Rule	0.031	1	EPA 8270C
67	Bis(2-chloroisopropyl) ether	39638329	Aquatic Toxicity	122 ⁽²⁾	10	EPA 8270C
68	Bis(2-ethylhexyl) phthalate	117817	National Toxics Rule	1.8	3	EPA 8270C
70	Butyl benzyl phthalate	85687	Aquatic Toxicity	3 ⁽⁵⁾	10	EPA 8270C
73	Chrysene	218019	Calif. Toxics Rule	0.0044	5	EPA 8270C
81	Di-n-butylphthalate	84742	Aquatic Toxicity	3 ⁽⁵⁾	10	EPA 8270C
84	Di-n-octylphthalate	117840	Aquatic Toxicity	3 ⁽⁵⁾	10	EPA 8270C
74	Dibenzo(a,h)-anthracene	53703	Calif. Toxics Rule	0.0044	0.1	EPA 8270C
79	Diethyl phthalate	84662	Aquatic Toxicity	3 ⁽⁵⁾	2	EPA 8270C
80	Dimethyl phthalate	131113	Aquatic Toxicity	3 ⁽⁵⁾	2	EPA 8270C
86	Fluoranthene	206440	Calif. Toxics Rule	300	10	EPA 8270C
87	Fluorene	86737	Calif. Toxics Rule	1300	10	EPA 8270C
90	Hexachlorocyclopentadiene	77474	Taste and Odor	1	1	EPA 8270C
92	Indeno(1,2,3-c,d)pyrene	193395	Calif. Toxics Rule	0.0044	0.05	EPA 8270C
93	Isophorone	78591	National Toxics Rule	8.4	1	EPA 8270C
98	N-Nitrosodiphenylamine	86306	National Toxics Rule	5	1	EPA 8270C
96	N-Nitrosodimethylamine	62759	National Toxics Rule	0.00069	5	EPA 8270C
97	N-Nitrosodi-n-propylamine	621647	Calif. Toxics Rule	0.005	5	EPA 8270C
95	Nitrobenzene	98953	National Toxics Rule	17	10	EPA 8270C
53	Pentachlorophenol	87865	Calif. Toxics Rule	0.28	0.2	EPA 8270C
99	Phenanthrene	85018	No Criteria Available		5	EPA 8270C
54	Phenol	108952	Taste and Odor	5	1	EPA 8270C
100	Pyrene	129000	Calif. Toxics Rule	960	10	EPA 8270C

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26 March 2010

CTR #	Constituent	CAS Number	Controlling Water Quality Criterion for Surface Waters		Criterion Quantitation Limit ug/L or noted	Suggested Test Methods
			Basis	Criterion Concentration ug/L or noted ¹		
INORGANICS						
	Aluminum	7429905	Ambient Water Quality	87	50	EPA 6020/200.8
1	Antimony	7440360	Primary MCL	6	5	EPA 6020/200.8
2	Arsenic	7440382	Ambient Water Quality	0.018	0.01	EPA 1632
15	Asbestos	1332214	National Toxics Rule/ Primary MCL	7 MFL	0.2 MFL >10um	EPA/600/R-93/116(PCM)
	Barium	7440393	Basin Plan Objective	100	100	EPA 6020/200.8
3	Beryllium	7440417	Primary MCL	4	1	EPA 6020/200.8
4	Cadmium	7440439	Public Health Goal	0.07	0.25	EPA 1638/200.8
5a	Chromium (total)	7440473	Primary MCL	50	2	EPA 6020/200.8
5b	Chromium (VI)	18540299	Public Health Goal	0.2	0.5	EPA 7199/1636
6	Copper	7440508	National Toxics Rule	4.1 ⁽⁶⁾	0.5	EPA 6020/200.8
14	Cyanide	57125	National Toxics Rule	5.2	5	EPA 9012A
	Fluoride	7782414	Public Health Goal	1000	0.1	EPA 300
	Iron	7439896	Secondary MCL	300	100	EPA 6020/200.8
7	Lead	7439921	Calif. Toxics Rule	0.92 ⁽⁶⁾	0.5	EPA 1638
8	Mercury	7439976	TMDL Development		0.0002 ⁽⁷⁾	EPA 1669/1631
	Manganese	7439965	Secondary MCL/ Basin Plan Objective	50	20	EPA 6020/200.8
9	Nickel	7440020	Calif. Toxics Rule	24 ⁽⁶⁾	5	EPA 6020/200.8
10	Selenium	7782492	Calif. Toxics Rule	5 ⁽⁸⁾	5	EPA 6020/200.8
11	Silver	7440224	Calif. Toxics Rule	0.71 ⁽⁶⁾	1	EPA 6020/200.8
12	Thallium	7440280	National Toxics Rule	1.7	1	EPA 6020/200.8
	Tributyltin	688733	Ambient Water Quality	0.063	0.002	EV-024/025
13	Zinc	7440666	Calif. Toxics Rule/ Basin Plan Objective	54/ 16 ⁽⁶⁾	10	EPA 6020/200.8
PESTICIDES - PCBs						
110	4,4'-DDD	72548	Calif. Toxics Rule	0.00083	0.02	EPA 8081A
109	4,4'-DDE	72559	Calif. Toxics Rule	0.00059	0.01	EPA 8081A
108	4,4'-DDT	50293	Calif. Toxics Rule	0.00059	0.01	EPA 8081A
112	alpha-Endosulfan	959988	National Toxics Rule	0.056 ⁽⁹⁾	0.02	EPA 8081A
103	alpha-Hexachlorocyclohexane (BHC)	319846	Calif. Toxics Rule	0.0039	0.01	EPA 8081A
	Alachlor	15972608	Primary MCL	2	1	EPA 8081A
102	Aldrin	309002	Calif. Toxics Rule	0.00013	0.005	EPA 8081A
113	beta-Endosulfan	33213659	Calif. Toxics Rule	0.056 ⁽⁹⁾	0.01	EPA 8081A
104	beta-Hexachlorocyclohexane	319857	Calif. Toxics Rule	0.014	0.005	EPA 8081A
107	Chlordane	57749	Calif. Toxics Rule	0.00057	0.1	EPA 8081A
106	delta-Hexachlorocyclohexane	319868	No Criteria Available		0.005	EPA 8081A

CTR #	Constituent	CAS Number	Controlling Water Quality Criterion for Surface Waters		Criterion Quantitation Limit ug/L or noted	Suggested Test Methods
			Basis	Criterion Concentration ug/L or noted ¹		
111	Dieldrin	60571	Calif. Toxics Rule	0.00014	0.01	EPA 8081A
114	Endosulfan sulfate	1031078	Ambient Water Quality	0.056	0.05	EPA 8081A
115	Endrin	72208	Calif. Toxics Rule	0.036	0.01	EPA 8081A
116	Endrin Aldehyde	7421934	Calif. Toxics Rule	0.76	0.01	EPA 8081A
117	Heptachlor	76448	Calif. Toxics Rule	0.00021	0.01	EPA 8081A
118	Heptachlor Epoxide	1024573	Calif. Toxics Rule	0.0001	0.01	EPA 8081A
105	Lindane (gamma-Hexachlorocyclohexane)	58899	Calif. Toxics Rule	0.019	0.019	EPA 8081A
119	PCB-1016	12674112	Calif. Toxics Rule	0.00017 ⁽¹⁰⁾	0.5	EPA 8082
120	PCB-1221	11104282	Calif. Toxics Rule	0.00017 ⁽¹⁰⁾	0.5	EPA 8082
121	PCB-1232	11141165	Calif. Toxics Rule	0.00017 ⁽¹⁰⁾	0.5	EPA 8082
122	PCB-1242	53469219	Calif. Toxics Rule	0.00017 ⁽¹⁰⁾	0.5	EPA 8082
123	PCB-1248	12672296	Calif. Toxics Rule	0.00017 ⁽¹⁰⁾	0.5	EPA 8082
124	PCB-1254	11097691	Calif. Toxics Rule	0.00017 ⁽¹⁰⁾	0.5	EPA 8082
125	PCB-1260	11096825	Calif. Toxics Rule	0.00017 ⁽¹⁰⁾	0.5	EPA 8082
126	Toxaphene	8001352	Calif. Toxics Rule	0.0002	0.5	EPA 8081A
	Atrazine	1912249	Public Health Goal	0.15	1	EPA 8141A
	Bentazon	25057890	Primary MCL	18	2	EPA 643/515.2
	Carbofuran	1563662	CDFG Hazard Assess.	0.5	5	EPA 8318
	2,4-D	94757	Primary MCL	70	10	EPA 8151A
	Dalapon	75990	Ambient Water Quality	110	10	EPA 8151A
	1,2-Dibromo-3-chloropropane (DBCP)	96128	Public Health Goal	0.0017	0.01	EPA 8260B
	Di(2-ethylhexyl)adipate	103231	USEPA IRIS	30	5	EPA 8270C
	Dinoseb	88857	Primary MCL	7	2	EPA 8151A
	Diquat	85007	Ambient Water Quality	0.5	4	EPA 8340/549.1/HPLC
	Endothal	145733	Primary MCL	100	45	EPA 548.1
	Ethylene Dibromide	106934	OEHHA Cancer Risk	0.0097	0.02	EPA 8260B/504
	Glyphosate	1071836	Primary MCL	700	25	HPLC/EPA 547
	Methoxychlor	72435	Public Health Goal	30	10	EPA 8081A
	Molinate (Ordram)	2212671	CDFG Hazard Assess.	13	2	EPA 634
	Oxamyl	23135220	Public Health Goal	50	20	EPA 8318/632
	Picloram	1918021	Primary MCL	500	1	EPA 8151A
	Simazine (Princep)	122349	USEPA IRIS	3.4	1	EPA 8141A
	Thiobencarb	28249776	Basin Plan Objective/Secondary MCL	1	1	HPLC/EPA 639
16	2,3,7,8-TCDD (Dioxin)	1746016	Calif. Toxics Rule	1.30E-08	5.00E-06	EPA 8290 (HRGC) MS
	2,4,5-TP (Silvex)	93765	Ambient Water Quality	10	1	EPA 8151A

CTR #	Constituent	CAS Number	Controlling Water Quality Criterion for Surface Waters		Criterion Quantitation Limit ug/L or noted	Suggested Test Methods
			Basis	Criterion Concentration ug/L or noted ¹		
	Diazinon	333415	CDFG Hazard Assess.	0.05	0.25	EPA 8141A/GCMS
	Chlorpyrifos	2921882	CDFG Hazard Assess.	0.014	1	EPA 8141A/GCMS
OTHER CONSTITUENTS						
	Ammonia (as N)	7664417	Ambient Water Quality	1500 ⁽¹¹⁾		EPA 350.1
	Chloride	16887006	Agricultural Use	106,000		EPA 300.0
	Flow			1 CFS		
	Hardness (as CaCO ₃)			5000		EPA 130.2
	Foaming Agents (MBAS)		Secondary MCL	500		SM5540C
	Nitrate (as N)	14797558	Primary MCL	10,000	2,000	EPA 300.0
	Nitrite (as N)	14797650	Primary MCL	1000	400	EPA 300.0
	pH		Basin Plan Objective	6.5-8.5	0.1	EPA 150.1
	Phosphorus, Total (as P)	7723140	USEPA IRIS	0.14		EPA 365.3
	Specific conductance (EC)		Agricultural Use	700 umhos/cm		EPA 120.1
	Sulfate		Secondary MCL	250,000	500	EPA 300.0
	Sulfide (as S)		Taste and Odor	0.029		EPA 376.2
	Sulfite (as SO ₃)		No Criteria Available			SM4500-SO3
	Temperature		Basin Plan Objective	°F		
	Total Dissolved Solids (TDS)		Agricultural Use	450,000		EPA 160.1

FOOTNOTES:

(1) - The Criterion Concentrations serve only as a point of reference for the selection of the appropriate analytical method. They do not indicate a regulatory decision that the cited concentration is either necessary or sufficient for full protection of beneficial uses. Available technology may require that effluent limits be set lower than these values.

(2) - For haloethers

(3) - For nitrophenols.

(4) - For chlorinated naphthalenes.

(5) - For phthalate esters.

(6) - Freshwater aquatic life criteria for metals are expressed as a function of total hardness (mg/L) in the water body. Values displayed correspond to a total hardness of 40 mg/L.

(7) - Mercury monitoring shall utilize "ultra-clean" sampling and analytical methods. These methods include:

Method 1669: Sampling Ambient Water for Trace Metals at USEPA Water Quality Criteria Levels, USEPA; and

Method 1631: Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence, USEPA

(8) - Basin Plan objective = 2 ug/L for Salt Slough and specific constructed channels in the Grassland watershed.

(9) - Criteria for sum of alpha- and beta- forms.

(10) - Criteria for sum of all PCBs.

(11) - Freshwater aquatic life criteria for ammonia are expressed as a function of pH and temperature of the water body. Values displayed correspond to pH 8.0 and temperature of 22°C.

Dioxin and Furan Sampling

Section 3 of the State Implementation Plan requires that each NPDES discharger conduct sampling and analysis of dioxin and dibenzofuran congeners. Dioxin and Furan sampling shall be conducted in the effluent and receiving water once during dry weather and once during wet weather.

Each sample shall be analyzed for the seventeen congeners listed in the table below. High Resolution GCMS Method 8290, or another method capable of individually quantifying the congeners to an equivalent detection level, shall be used for the analyses.

For each sample the discharger shall report:

- The measured or estimated concentration of each of the seventeen congeners
- The quantifiable limit of the test (as determined by procedures in section 2.4.3, No. 5 of the SIP)
- The Method Detection Level (MDL) for the test

The TCDD equivalent concentration for each analysis calculated by multiplying the concentration of each congener by the Toxicity Equivalency Factor (TEF) in the following table, and summing the resultant products to determine the equivalent toxicity of the sample expressed as 2,3,7,8-TCDD.

Congener	TEF
2,3,7,8-TetraCDD	1.0
1,2,3,7,8-PentaCDD	1.0
1,2,3,4,7,8-HexaCDD	0.1
1,2,3,6,7,8-HexaCDD	0.1
1,2,3,7,8,9-HexaCDD	0.1
1,2,3,4,6,7,8-HeptaCDD	0.01
OctaCDD	0.0001
2,3,7,8-TetraCDF	0.1
1,2,3,7,8-PentaCDF	0.05
2,3,4,7,8-PentaCDF	0.5
1,2,3,4,7,8-HexaCDF	0.1
1,2,3,6,7,8-HexaCDF	0.1
1,2,3,7,8,9-HexaCDF	0.1
2,3,4,6,7,8-HexaCDF	0.1
1,2,3,4,6,7,8-HeptaCDF	0.01
1,2,3,4,7,8,9-HeptaCDF	0.01
OctaCDF	0.0001